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POSTPARTAL CARE*

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Within recent years prenatal care has become so much the rule that eclampsia and other preventable complications of pregnancy have shown a markedly decreased incidence. Actual parturition has been made less trying by an earlier use of forceps and version and a wider use of anesthesia, so that grave birth injuries following prolonged labor and nervous exhaustion following hours and days of unrelieved pain no longer force women into years of invalidism as was only too frequently the case a generation or two ago. Postpartal care, on the other hand, has made no such advances. The normal patient, particularly if she is delivered outside a hospital, is given no care at all except by her nurse; the abnormal patient is treated by empirical methods according as her symptoms demand attention rather than being given a routine care which will prevent most of these symptoms from arising and which will restore her to her family and to society as sound and well as when she entered upon the ordeal of pregnancy. For the last several years I have treated all my puerperal cases according to a uniform routine and because my results have been very gratifying I am tempted to bring the subject before you.

It is not my intention to discuss the third stage of labor except to point out that true postpartal care begins then for the reason that the amount of blood lost by a patient who is already exhausted from a long and tiring labor will naturally have much to do with her convalescence. For many years it has been my custom to order 1 cc. of pituitrin intramuscularly immediately after the delivery of the baby, and although I cannot give you definite figures I feel no hesitancy in saying that this simple measure reduces the so-called normal blood loss from a third to a half. I have never seen a tetanic contraction of the uterus follow its use nor can I recall a single instance in which the expulsion of the placenta was not spontaneous. Moreover, the uterus is usually so firmly contracted that further bleeding is negligible. In order to maintain this state of contraction throughout the first few days of pregnancy it is my practice, as soon as the patient is sufficiently awake from the anesthetic, to give a dram of ergot by mouth and repeat it every 4 or 5 hours until 6 doses have been given. For the next 3 or 4 days I give from 1 to 3 doses daily, depending on the amount of lochia and its color and odor. Firm contraction of the uterus is most important as many slight rises in temperature during the puerperium and even occasional sharp elevations are due to puddling and stagnation of the lochial discharges from a flabby, uncontracted uterus. Fowler's position is useful in encouraging drainage and limiting absorption and, as occasionally happens, where blood clots block the internal os with consequent collection and putrefaction of the lochia, small doses of pituitrin by needle will overcome the condition, or a simple examination may displace the offending clot. Free movement, which I shall mention in some detail later, is also a valuable prophylactic measure.

Unless the lochial discharge is considerably diminished by the sixth or seventh day it should be controlled by ice caps to the abdomen or small doses of pituitrin or ergot. After the tenth day it should be practically colorless. Patients who are allowed to lose blood in small amounts for weeks, not to mention the heavier flows, will inevitably end with anemia, constipation and digestive and nervous symptoms, as well as inability to nurse the baby. My

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patients are advised to report to me on the fifteenth day if the lochia are not entirely colorless. Ergotine is prescribed, 2 grains twice a day for 10 days, the medication to be continued over that period even if the flow is absolutely checked as the whole condition is a manifestation of tardy involution of the uterus. Daily douches are recommended for the next 10 days and then 3 times a week for the next 5 weeks. If the ergotine fails to check the flow and inspection with the bivalve speculum shows no pathology, the cervix and vault of the vagina are painted with iodine, the excess being wiped out with alcohol, and an ichthyol and glycerine tampon is inserted. This treatment is repeated every second day until the bleeding is checked. The knee chest position is helpful twice a day for 10 or 15 minutes.

Naturally strict asepsis is to be maintained throughout the lying-in period and in this connection I should like to point out the dangers of vulval pads applied tightly against the external genitalia. They collect discharges which are always infected, and diminish free drainage, and in my opinion are responsible for many mild infections and some serious ones. The pad should be tied loosely or even allowed to lie on the bed, and should, of course, be changed frequently. Particular care should be exercised in the presence of lacerations.

The bladder should be emptied within 8 hours after delivery and at least every 6 or 8 hours during the first few days. If this is difficult, warm irrigations over the vulva, hot applications to the bladder region, or the instillation of 3 or 4 ounces of warm glycerine into the rectum will usually result in a spontaneous act. The patient may even be raised to a sitting position if the lacerations have not been extensive. The catheter should be a last resort, but if it is necessary, it should be used regularly every 8 hours as fewer instances of cystitis will result than if the bladder is allowed to become enormously distended. The old custom of drastic purgation on the third day is pernicious; it exhausts the patient, depletes her system of needed fluids, and has been definitely proved to be responsible for many temperature elevations at this time. A simple oil and glycerine enema on the second morning, repeated daily as indicated, is a satisfactory measure entirely devoid of these disadvantages. After the patient is out of bed the simplest laxative which will answer the purpose without discomfort or dehydration is best; the various mineral oils are excellent. Careful irrigation and cleansing of the parts must follow every evacuation.

I can see no reason why the puerperal patient should not have practically a full diet from the start. Where the labor has been long and tedious and has culminated in operative delivery the situation is rather different and the diet is restricted to fluids for the first 24 hours. After that, and in other cases immediately after delivery when nausea has passed, soft diet is given at once and full diet within the next 24 hours. Fluids are forced at all times and fruit juices are included. As a matter of fact, there is no reason why a nursing woman should not be permitted to eat anything she is in the habit of eating which does not disturb her digestion. In the average case after the first 48 hours the patient is given 3 regular meals a day and nothing more. The giving of food, milk, beer, etc., between meals and during the night is not only unnecessary but such cramming is bound to have a deleterious effect on a patient confined to bed without exercise of any sort.

My personal preference is to omit the use of the abdominal binder. It has no purpose other than to eliminate the uneasy feeling the patient experiences when the heavy uterus drops from side to side as she turns in bed, and I have seen more than one postpartal hemorrhage follow its tight application too soon after delivery because the heavy uterus was pinned down and constricted between it and the promontory of the sacrum. If the patient insists I permit its use, particularly if she is a multipara, but it must be very loosely applied.

At least for the first 4 or 5 days I endeavor to restrict visitors to the immediate family and I urge that their stay be limited to 15 minutes or less. I need not say that this is a rule I have never been able to enforce successfully, but its wisdom is manifest. Freedom of movement is permitted almost from the first, even where lacerations are present. The old idea of keeping the patient flat on her back is all wrong. My patients are encouraged to move from side to side within a few hours after delivery and I permit them to sit up in bed, of course, properly supported, as early as the third or fourth day. Another exploded idea is that of allowing patients out of bed on the ninth day for no consideration other than that it happens to be the ninth day, without regard to lochial discharge, the position of the uterus or their general

well-being. Rest in bed is essential until the discharge has become almost entirely serous in character, and the uterus has become well retracted below the symphysis. The latter point should always be determined by vaginal examination. The patient sits up for gradually increasing periods for two days and walks about on the third day. Stairs should not be attempted under a month, though short walks are permitted after the third week. After the seventh week moderate setting-up exercises should be encouraged. Ptosis is a frequent complication of the puerperium and for that reason the patient should be instructed, as soon as she begins to move about, to fasten her binder snugly or to put on her corsets while lying down. All attempts at dieting and reducing should be strictly interdicted.

No amount of prenatal care and attention to the nipples is anything like as important as keeping a hungry baby away from a dry breast. If this is not done fissues and abrasions are bound to follow and they, as you know, account for practically one hundred per cent of breast infections. From 8 to 12 hours after birth is soon enough to put the baby to the breast and nursing is not permitted oftener than every 4 hours for 5 minutes until the milk flow is well established. Then a regular 3 hour schedule is instituted for 15 minutes at a time, eliminating night feedings as much as possible. For the first 10 days a thin film of borated vaseline is spread over the nipples and protected with sterile gauze or wax paper. Boracic acid should be used before and after each nursing, but alcohol or any other agent which will remove the natural lubrication of the nipple is never permitted. The hard lumps so often found in the breast are really due to the twisting of the veins as the breasts drop into the axillae from their own weight, and not, as was so long supposed, to the caking of the milk. Therefore, as soon as the breasts begin to feel heavy or the least sign of engorgement appears a supporter is applied to hold them well up and towards the mid line, usually supplemented with pads of cotton at the outer lateral borders. The purpose of the binder is defeated if the breasts are dragged out of their natural position, therefore the proper application is most important. It should be gradually tightened as indicated. If engorgement should occur, hot stupes applied for 15 or 20 minutes every 3 or 4 hours will usually give relief. The breast pump and massage should have no place in the treatment; they do harm and certainly nothing more painful could be devised.

An examination 6 or 8 weeks after delivery is usually routine with specialists but is too often overlooked entirely by general practitioners. It is assumed that all perineal lacerations have been repaired at once. The immediate repair of cervical lacerations is usually frowned upon, and rightly so, since the results are seldom satisfactory. If such tears are neglected, however, the resulting erosion and eversion of the external os will lead to disturbances of circulation, chronic glandular infections and ugly discharges, and some treatment is demanded. I have found that from 1 to 3 applications of the small cautery, a perfectly feasible office procedure, will burn down the excessive glandular proliferation and allow the epithelium from the vaginal surface of the cervix to cover the affected area. Tampons are used in the interval between treatments. The results have been most satisfactory; there is less scar tisue, less chance of terility and fewer difficult labors when pregnancy supervenes than could possibly result from any type of surgical repair.

Uterine displacements are also frequently found at the time of this examination. If they are not giving rise to symptoms and the uterus is well contracted they may safely be disregarded, but if the uterus is larger than normal and soft in consistency, chronic engorgement is the result, with menorrhagia and dysmenorrhea when menstruation is re-established. Tampons and douches, the knee chest position, sometimes the use of a Smith or Hodge pessary are all that is necessary, for it is astonishing how rapidly such displacements disappear when the uterus regains its normal tone.

I have endeavored to outline to you the procedure which I have been using with excellent results in my own baby cases. For the most part it is based simply on common sense and involves very little extra effort on the part of the physician other than a modicum of attention to his patient after she is delivered, which will be more than compensated for by the healthy, satisfied women such treatment invariably produces.

DISCUSSION.

Dr. J. F. Dicks: The point I wish to bring up and lay more stress on is that we are not examining our patients carefully enough after delivery. Years ago we were satisfied to make a vaginal examination after the

six weeks had elapsed, then pass the case up, perfectly satisfied that everything was normal. Dr. Lynch of San Francisco has proved that forty per cent of uterine displacements are found in cases of normal deliveries. If we examine them, not only six weeks after delivery, but within the year, and find these displacements, we can do something for them. If over a year or a year and a half is allowed to elapse before we discover the displacement it brings it down to a surgical procedure. Displacements can be classified as recent when occurring within a year, and old when longer than a year. In recent displacements where the relaxation is slight, by tamponing in the correct position we can do away with a great deal of surgery. If we paid more attention and examined our patients subsequent (within a year) to the examination six weeks after delivery, we would make a great point in gynecology.

Dr. W. E. Levy: There is a great amount of common sense in this paper. The routine is practically the same as we follow at Touro. Some points should be emphasized, one of which is diet. We have for the past four years, at Touro, given a full diet and found no ill results. I see no reason why a woman who has gone through normal labor should not be able to eat anything—her abdomen has not been opened. True, if there is a very great laceration involving the sphincter, that is another story.

Another good thing is the practice, after the second or third day, of making the patient lie for an hour on her abdomen each morning and afternoon. The post-partal uterus is a great big thing with loose ligaments. By making the mother lie in this position twice daily you favor drainage. I notice in our clinical work we have cut down a great many post-partal retroversions. The most successful method, after a month or six weeks, is the douche and tampon and the application of the Hodge pessary. It is awful to see a suspension done, six or seven months after delivery, on a patient with a perfectly movable uterus, because during the next pregnancy the whole thing is coming down and she has been subjected to a perfectly useless operation.

Regarding the breasts. Dr. Miller's friend, Jellinghaus, showed me a litle trick. Instead of a breast binder that has to be removed at every nursing, or at any other time one cares to tend to the nipples, he takes wide strips of Z-O, placing these above and below the breasts, then gets the nurse to hold the breasts towards the midline, running big bands down on either side to the midclavicular line. The support, as long as required, is permanent, and you can apply ice bags or any other therapy nicely. The application of 5 per cent resorcin to the nipples with fissures, etc., washing off carefully before each nursing, accomplishes two things: it softens and lubricates and takes care of the fissures which are the starting points for the breast abscess.

Dr. Hilliard Miller (concluding): I have nothing more to say except to comment again about the diet for the puerperal patient. I am not inclined to believe that articles of food have any influence on the milk supply. I do believe that a well-balanced diet, irrespective of articles of food, is a conducive factor to a well-balanced and generous quantity of milk. This also applies to the influence that laxatives or purgatives may tend to show. Any disturbance resulting from laxatives or purgatives is due entirely to limiting the quantity of milk by the dehydration they produce, rather than to their being secreted through the milk and influencing the baby in that way.

SUB-ACUTE BACTERIAL ENDOCARDITIS WITH REPORT OF A CASE*

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In a review of the literature on sub-acute bacterial endocarditis the first record of the clinical picture of the prolonged form which Blumer was able to find was an article entitled "On some of the principal effects resulting from the detachment of fibrinous deposits from the interior of the heart and their mixture with the circulating blood," by W. Senhouse Kirkes in 1852. In 1885 Sir William Osler in his Gulstonian Lectures first called attention to the disease in its varied forms. The peculiar skin lesions which have received the name of Osler's sign were also noted between 1873 and 1900 by different observers. In 1899 Mabel Austin described the first case due to bacillus influenza.

Since the beginning of the present century the most important contributions have been by Koeniger, Lohlein, Libman, Coombs and Clawson on the pathological side; Scottmuller, Rosenau, Horder, Major, Kinsella, Fox, Lynch and Clawson on the bacteriological and serological aspects; Osler, Libman, Billings, Vacquez, and Kostner on the clinical viewpoints.

An exact agreement as to just what is meant by sub-acute bacterial endocarditis has not been reached. Libman has included such conditions as are frequently called chronic ulcerative endocarditis, chronic malignant endocarditis and endocarditis lenta. He does not consider valvular defects resulting from rheumatic and syphilitis infections as being of the sub-acute type. He classifies endocarditis as rheumatic, syphilitic, and bacterial. He subdivides the bacterial into acute (lasting up to about six weeks) and sub-acute (lasting from four to eighteen months or more).

Blumer classifies all protracted cases as sub-acute. Some of the different names that have been given to the condition are as follows: Chronic ulcerative endocarditis (Riesman), Sub-acute infective endocarditis (Libman), Endocarditis Lenta (Scottmuller), Chronic septic endocarditis (Heubner), Chronic streptococcus endocarditis (Litten), Chronic malig-

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nant endorcarditis (Weber). The term malignant was objected to because it throws no light on either the etiology or pathology; septic, because there was no pus formation; ulcerative because the lesions are much more frequently proliferative than destructive; infectious, because it would include rheumatic and syphilitic.

Blumer states that unfortunately there are few accurate figures covering the frequency of sub-acute bacterial endocarditis as compared with the other three common infectious types, rheumatic, syphilitic and acute bacterial.

In 1918 Libman stated that he had personally seen nearly three hundred cases as quoted by L. C. Montgomery.

Blumer finds it difficult to say whether the disease is actually increasing or whether there is an increasing ability on the part of the profession to recognize the condition.

The lesions are due to two principal factors, (1) the toxemia a necessary accompaniment of an infectious process, (2) the mechanical factor, the lodgment of emboli of various sizes in the different organs of the body, detached from the diseased endocardium.

The lesions in the heart usually show envolvement of valves already damaged by previous endocarditis. As the inflammatory process is usually engrafted on already damaged valves there may be no change in the pre-existing physical signs with on-set of sub-acute bacterial endocarditis.

Envolvement of mural endocardium and chordae tendinae and slight impairment of myocardium also occurs.

It has been fairly definitely proven that the disease has a tendency to attack damaged valves; in one hundred fifty autopsies 38% showed evidence of old valve lesions. Blumer thinks that a more careful study of autopsies would show a much larger percentage of cardiac lesions. The frequency with which the mural endocardium is also involved is important as in one hundred fifty autopsies, 55% showed envolvement of either the walls of the cavities, or the chordae tendinae or both, pathological conditions of myocardium observed to be slight in one hundred fifty autopsies and in the nature of fatty degeneration or cloudy swelling.

The more important extra-cardiac lesions are (1) vascular, of which embolism is the most frequent, the favorite sites being the aorta, pulmonary vessels, coronaries, iliacs, arteries of extremities and above all the cerebral vessels.

Thrombo-phlebitis in the veins of lower extremities has been observed at times. Embolic aneurisms were observed nine times in one hundred fifty autopsies.

The striking feature of embolic phenomena in sub-acute bacterial endocarditis is the lack of suppuration, possibly due to low virulence of infecting organisms or to the small number of organisms present in some of emboli.

The characteristic kidney lesions were first pointed out by Lohlein in 1910. Macroscopically, the organs are only moderately enlarged, surface is usually smooth and covered with punctate hemmorrhages "flea bitten." Microscopically, the lesions are described by Lohlein as an embolic focal nephritis; the lesion is due to lodgment in the glomerular capillaries of bacterial emboli.

When emboli occur in kidneys as usually evidenced by a sudden severe sharp pain in right or left lumbar region, the urine within twelve to twenty-four hours is observed to be smoky and blood tinged in appearance and on examination will usually contain a fair amount of albumen, numerous pus and red blood cells, hyaline, leucocytic and granular casts.

Etiology: Summing up the observations of different authors show it to be a disease of young adults and adolescence; it occurs during the period of greatest incidence of valvular heart disease from all causes except syphilis and arteriosclerosis.

Sex: Osler and Blummer make it 60% males and 40% females. The portal of entry of infecting organisms is very difficult to discover at times as shown in the case to be reported. The teeth, tonsils, and female generative organs are probably the most common offenders. There is a history of rheumatism in a large percentage of cases. Libman states that a past history of rheumatism is almost constant.

Bacteriology: Most observors point out that the two most common organisms concerned with sub-acute bacterial endocarditis are the streptococcus group and bacillus influenza. Libman gives streptococcus viridans 95%, bacillus influenza 5%. Libman and Celler have pointed out that the organisms grow slowly, colonies not appearing as a rule until thirty-six to forty-eight hours. It is necessary to watch plates at least eight days as proven in the case to be reported.

In one hundred forty-five cases of bacterial endocarditis in which autopsy was performed one hundred fifteen were streptococcal, twenty-eight pneumococcal,

twenty-six staphylococcus aureus, and four were staphylococcus albus in origin.

The clinical manifestations fall usually into two periods, (1) an early period in which symptoms are those of low grade infection, (2) A late period when signs of embolism predominate. In a great majority of cases the disease attacks patients with well compensated valvular lesions. The onset is usually slow. Weakness is the most frequent early complaint followed by fever, digestive disturbance, cardiac symptoms and sweats.

Emaciation is mentioned as a prominent feature. However, some patients remain well nourished up to time of death. Patients do not usually run a high temperature, the daily maximum being usually 102 degrees F. In some cases fever is accompanied by chills; in others by sweats and in others chills, fever and sweats occur in regular sequence.

The heart signs are usually those of mitral and aortic disease. Dyspnea is a common cardiac symptom. The pulse is not greatly modified until later on in the disease. Cough is a common symptom probably most often due to the liberation of small emboli which lodge in pulmonary vessels; also to an accompanying bronchitis.

Loss of appetite is a common complaint; also flatulency and constipation. Diarrhea is not infrequent. Vomiting is troublesome at times. The liver is usually enlarged from chronic passive congestion, the spleen from infarction in about fifty per cent of the cases. There is a moderate grade of anemia, a progressive increase or decrease of leucocytes.

The most common skin lesions are petechial spots, probably embolic in origin, appearing in crops as red, slightly elevated papules on the fingers, forearms, elbows, neck, axillary regions, and groins as the most common sites; they are often spoken of as Osler's painful nodules. The evidence of nephritis varies. About one-third of patients show clinical evidence of renal infarction.

The course as a rule is not progressively downwards as there are frequent remissions. But with few exceptions the disease finally ends fatally. Of two hundred eighty-one reported cases death occurred between the end of third and end of eighth week. In two hundred twelve or 75% only nine lived over sixteen months, and six of these lived over two years. The case to be reported l i v e d approximately twelve months from date of onset of symptoms.

Osler states that the cardinal diagnostic features are fever, existence of an old valve lesion, embolic phenomena and positive blood culture.

The disease is most likely to be confused with neurasthenia in the early stages; malaria, typhoid, tuberculosis, pyemia with endocarditis, abscess of spleen, liver or kidney and pernicious anemia.

Prognosis: Recovery is rare. Billings in one hundred cases saw one recovery. Libman in one hundred fifty cases saw four recoveries. Blumer saw one case recover.

There is little to be said concerning treatment. The removal of local foci of infection often located in teeth, tonsils, sinuses, and female genitalia should be attended to as a prophylactic measure. Vaccine treatment is of little or no value. Autogenous vaccines are generally used. Blood transfusion has been tried with very little results.

The following case was observed in the Hospital of the Good Samaritan, Los Angeles, Cal. White, male, age forty-eight years. Complained on the eighteenth of April, 1923, of having felt tired for several weeks. He took his temperature that afternoon and found it to be 99.4 degrees F. Complained of feeling worn-out every afternoon and feverish. After discovering fever, took ten grains quinine daily for one month when he had a chill, and even though he continued quinine he still had fever from 99.6 degrees to 101 degrees F. in the afternoon. He would remain in bed in afternoons; also took cacodylate of soda. Went to a ranch in West Texas on June 16th remaining there about two weeks. Fever continued while there. From Texas he came to Los Angeles, Cal., entering the Good Samaritan Hospital July 12, 1923. During all this time had several night sweats. Bowels have been out of order for a number of months. Troubled considerably with flatulency and constipation. Did not complain of pain or aching. Loss of about fifteen pounds in weight since April. Hands and feet never swell. No dyspnea. No vertigo, but has a heart murmur. Appetite has been poor since April. No nocturia; no burning or frequency. Urine has been examined frequently and found to be normal.

Past history.—Denies typhoid, scarlet fever, when a child. Dengue fever in October, 1922, which did him up very badly for several months. Severe attack of influenza ten years ago. Heart murmur discovered several years ago.

Physical examination by Dr. E. Fishbaugh, July 12, 1923, Los Angeles, Cal.—Tall, very well nourished, gray-haired man, pupils equal anl react normally to light and accommodation, tongue coated, teeth in excellent condition, tonsils not remarkable, superficial lymph glands not enlarged, thyroid gland palpable but not enlarged, no tremor.

Chest: Well developed. Lungs negative on percussion and auscultation.

Heart: Left border cardiac dullness extends to nipple line, right border to right sternal margin, systolic murmur at apex transmitted to left axilla and over entire precordium. Blood pressure

110/70. Radials and brachial arteries apparently not thickened.

Abdomen' Soft, flat, and moderately tympantic, liver edge palpable on deep inspiration. Spleen not palpable. No tender areas.

Rectal: Prostate normal in size and painless.

Reflexes: Superficial and deep are normal.

Extremities: No edema.

Laboratory: Urine negative except for trace of albumen.

Blood: Hemoglobin 78 per cent, red blood cells 4,170,000, white blood cells 9,040, differential count: polys 70 per cent, small monos 25 per cent, large monos 5 per cent. No malarial parasites seen. Widal test negative (dilution 1-40). Blood cultures on all media sterile after four days.

X-ray examinaiton: Stereoscopic chest plates show moderate thickening about hilus of both lungs, moderate enlargement of heart.

Gastro-intestinal tract negative.

Progress notation Aug. 4, 1924. Afternoon temperature has continued as high as 101.4 degrees F., approaching normal in the morning. Slight cough past two days with dyspnea. Respiration between 30 and 38, and pulse as high as 104. Heart examination during period of observation shows a slight change in character of murmur at apex, it being a little rougher and louder. Impression of Dr. Fishbaugh was that of an endocarditis.

Returned home about Aug. 7, 1923, having stood trip from California fairly well. On Aug. 9th leucocyte count was 12,000, differential count: neutrophiles 75%, large lymphocytes 10%, small lymphocytes 15%. There was very little change in his condition until the latter part of August when his pulse became more irregular, complained of dyspnea and cough quite often, daily temperature varied from 99.4 degrees to 101 degrees F., perspiring freely at intervals.

Sept. 12th Blood culture negative after plating for four days.

Sept. 17th. Patient complained of twinges of pain in elbows and knees.

Sept. 18th. Abdominal contraction with weakness, sweating and irregular pulse. Blood culture negative for organisms, plated four days.

Oct. 12th. Muscle and joint pain severe.

Oct. 18th. Small red spots observed on right ankle and somewhat painful.

Oct. 24th. Pain in joints very severe at times, few red spots on fingers.

Oct. 28th. Drenching sweats past two nights.

Nov. 18th. Pulse more irregular past two weeks. Complained occasionallly of precordial pain, purplish red spots appearing in crops on fingers of right hand. Slight improvement in general condition since about Oct. 15th.

Nov. 24th. Left wrist painful and swollen. Red spots appeared again on right thumb and beneath eyelid.

Nov. 27th. Small red spots appeared on upper eyelids; these spots usually faded away in from two to four days. Sodium cacodylate grains 3 intravenously every other day for past month.

Dec. 12th. Complaining of pain over left kidney. Urine very cloudy and dark for the next several days, containing large trace albumen, red blood cells, pus cells, hyaline and granular casts.

Dec. 29th. Complaining of pain in chest. Cough very troublesome the following day. Examination of the chest the following day showed area of dulness beneath right scapula with bronchial breathing, increased voice sounds and subcrepitant rales (probably pulmonary infarction).

Jan 4th. Both hands very painful.

Jan. 14th. Few small red spots beneath right eye, complains of feeling chilly, nervous and restless.

Jan. 20th. Permitted to have back rest twenty-five minutes and daily thereafter and up in Morris chair.

Jan. 26th. Blood culture made on beef nutrient broth. The broth remained clear for five days and the smears failed to show any organisms. On the sixth day the broth started to show slight cloudiness and the cloudiness increased each successive day without showing any organisms until the eighth day when on stained smears we found several groups of micrococcus tetragenous (staphylococcus albus) surrounded with halo-like capsules. Transplants made on plain and blood agar showed no growth until the fourth day when we noticed several transparent colonies.

Bezancon has isolated micrococcus tetragenous from a case of meningitis. A single case of micrococcus tetragenous septicemia is on record reported in 1905 by Foneaca.

Feb. 9th. In reclining chair daily for short while since Jan 26th during previous night awoke with severe pain in left abdomen and flank (like renal colic) probably resulting from renal infarction.

Feb. 10th. Urine exteremely dark (cloudy). Pain in left side continuous.

Feb. 12th. Urine clearer. Very tired and drowsy. Vomited.

Feb. 14th. Autogenous vaccine, four hundred million staphylococcus albus no reaction.

Feb. 18th. Vaccine—five hundred million and continued every five days up to March 6th.

Feb. 28th. Temperature remaining at a lower level, patient getting weaker, pulse more irregular and weak, heart flutters; up in chair at times.

March 6th. Red spots appeared on right wrist —Vomited—Urine very red.

March 8th. Large number small red spots on right elbow—temperature continued around 98 degrees to 99 degrees F.

March 12th. Vomited clear fluid. Right arm covered with bright red painful spots. Patient unable to speak. Vomited several times during the day.

March 13th. Very restless, extremities cold. Left hand badly swollen. Respiration labored. Pulse rapid and irregular.

March 14th. Condition still worse. Unable to speak, moaning, apparently in severe pain.

March 15th, 1923. Suffering with pain, muscular twitching. 11:00 a.m. severe convulsion, (probably cerebral embolism) respiration labored, four light convlusions between 1:00 p. m. and 5:00 p. m. when patient expired.

No autopsy obtained.

I wish to thank Drs. F. J. Frater and J. E. Knighton for the privilege of reporting this case.

EYE EMERGENCIES*

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NEW ORLEANS.

Each of us is called upon more or less frequently to render emergency aid to injured or otherwise sick eyes. To the inexperienced, the efficient care of these patients may be a rather difficult problem, because of the usual impracticability in securing immediate outside information, either from books or associates.

This subject was selected by my postgraduate class as the one which could possibly be of the greatest help from an ophthalmologist to a mixed audience of general physicians.

The most common ocular emergency is caused by foreign bodies, usually in the cornea. Very few of our medical ministrations produce more and prompter happiness than the successful removal of an ocular foreign body, which involves anaesthesia, neatly and completely removing the foreign body, and preventing pain recurrence.

Anaesthesia may be obtained with one or two drops of a 4% cocaine, 2% butyn, or 2% holocain solution or ointment. The affected eye can be held open with a speculum, or fingers, either of the operator or assistant. Intense light and magnification, as well as ocular fixation, are often necessary.

It is important to remove the entire foreign body as quickly, and with as little damage to the eye as possible. Rust spots, which quickly form, because of their chemical irritation, materially delay healing. A scalpel, Graefe knife, Dix's spud or pointed hook-shaped needles, etc., may be used. More important than the kind of instrument, is its cleanliness and its use from the side rather than the point, which upon a quick uncontrolled movement, increases the danger of puncturing the eyeball. I have perfected, and am having made in rustless steel, an instrument for this purpose, which is adapted for cutting, drilling, craping or levering with a minimum risk of perforating or otherwise damaging the eye.

Having removed the foreign body, our next problem is further relief from pain, usually dependent upon healing of the corneal epithelium, which generally takes place in from three to six hours. Pain may be lessened by the use of any non-irritating oinment, such as ordinary vaseline, with or without drugs, like yellow oxide of mercury 1%, bichloride 1/30%, boric acid 10%, on account of the minimized friction between the abraded cornea and the lid. More prompt and painless healing is perhaps facilitated by the incorporation of drugs which produce analgesia, stimulate healing and minimize bacterial growth. We use, for this purpose, an ointment containing vaseline, 1% novocaine, 1% balsam of peru and 2 % orthoform, in small probe pointed collapsible tubes. Should you so desire, we will gladly send an experimental quantity.

After removal of the foreign body, irrigation of the eye with any non-irritating solution and installation of an ointment as mentioned, preferably a gauze adhesive dressing is applied to the closed eye to minimize handling and infection, and the patient is instructed to keep both eyes closed as much as possible until the following day, when the cover is removed. If the eye is apparently entirely well, the patient can resume work, if not, the patient is instructed to return for further treatment. It is practically impossible to immobilize one eye with the other eye open, hence the advisability of keeping both eyes closed to minimize pain, which is increased by friction. In a rather large industrial practice I have been surprised at the small number of patients who have returned after the removal of corneal foreign bodies when the eyes have been treated as described.

Perhaps next in frequency are abrasions or slight surface defects, often following previously removed foreign bodies. The cause of this discomfort is difficult to see, because the distortion of the corneal reflex over the affected area, is often very slight and visible only with magnification or staining. The treatment is essentially that following the removal of foreign bodies.

Inverted lashes are a frequent cause of a sometimes sudden and apparently unexplained ocular discomfort. In removal it is important that the lashes are not broken because their stubby ends only aggravate discomfort.

In electric burns light sensitiveness is intensified to an extreme degree. In the slight forms we advise cold applications every one or two hours, avoidance of light, with dark glasses or confinement in a dark room, and the use of a bland ointment, preferably with holocain 1%, applied every two or three hours. In more severe burns of this type, homatropin or atropine is of

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advantage. Electric burns are essentially light and not heat burns, and heal rather slowly.

Burns of the lids, conjunctivae and cornea, from heat or chemicals in solid, liquid or gaseous form are also among the more common ocular accidents. Heat burns are perhaps best treated by first cleansing with any non-irritating solution at body temperature and then by applying vaseline or any other protective non-irritating substance to minimize exposure to air, which intensifies the pain. Dark glasses are of course a necessity whenever the eyes are oversensitive.

Our first thought in the treatment in chemical burns is naturally the neutralization of the irritant, which necessitates an understanding of its general composition. Alkali burns such as lime, lye and ammonia are perhaps best neutralized by ordinary sugar water which forms an innert saccharate, and is employed in the strength of about one teaspoon to the pint as an irrigation every hour during the first day. It is especially important in lime burns to evert the upper lid and remove every particle, because if left behind the lime comes in contact with, and further burns the cornea. Acids are best neutralized by a solution of ordinary baking soda, about one teaspoon to the quart, applied in the same way. If these solutions are not at hand, do not lose time; but wash the eyes out thoroughly and quickly with plain water; the chemical neutralization is a minor factor.

In this connection it is well to understand that the various solutions commonly used in eyes, such as borax, boric acid, normal salt, and a legion of others, probably practical, have no bactericidal value whatever. They facilitate the removal of mucus and are non-irritating on account of their chemical composition and because they are isotonic with the tears; further than this they have no curative virtue whatever. Castor oil if not rancid is non-irritating and protective, if rancid, it is neither. Milk used as an ocular irritating fluid has no particular value and can induce infection. Potatoes, meat, oysters, eye cups, and the many other applications used by the laity are to be condemned because they are potentially dirty and facilitate infection. Atropine should be used only when positively necessary. Its indiscriminate and careless use often prolongs disability in eye emergencies and occasionally ushers in an attack of acute glaucoma which otherwise might not at least have occurred for many years. The use of cocain solutions by the patient to relieve pain is only mentioned to be condemned, because cocain especially when repeatedly used not only destroys the corneal epithelium but devitalizes the ocular tissues and delays healing.

Insect stings or bites on the lids or eyeballs are usually painful but seldom serious. Several days, preferably with the use of bland ointment and protective glasses and with as little handling as possible usually restore the tissues to normal.

Hemorrhages in the lid and conjunctivae of themselves are usually not important except when they evidence intracranial bleeding. In seven to ten days the tissues usually resume their normal color and size, probably as well with as without theraputic acid. Poultices, leeches, and other methods of treatment apparently accomplish nothing except occasionally to increase the bleeding and introduce infection.

Lens dislocation, which may follow any injury to the ocular tissues, is one of the serious complications to which we have in the past not paid enough attention. It is especially important that industrial surgeons observe and record slight changes in anterior chamber depth and pupil eccentricity or distortion, in order that the victim, who will probably suffer a more or less complete loss of sight because of cataract or glaucoma, may have a better chance to recover the compensation which justice and the law provide.

In perforating injuries of the eyeball, we have the more serious ocular emergencies which may involve intraocular infection, iris prolapse, traumatic cataract, increased intraocular tension, retinal detachment, etc.; conditions which are usually best taken care of by the experienced. In the absence of apparent infection, irrigation with a clean non-irritating solution, the instillation of a bland ointment and the application of a protective dressing affords, generally speaking, the best possible emergency treatment. The use of foreign protein injections; such as ordinary skimmed milk; five to ten cc., previously boiled about five minutes, injected into the glutaeal or scapular region, to increase infection immunity, is an experimental procedure apparently justified. If there is pus in the eye or other evidence of ocular infection, bandages should never be used, because retained infectious material only damages the tissues with which it comes in contact.

Occasionally contagious material such as

gonorrheal pus comes in contact with the eyes. Immediate irrigation with a clean non-irritating solution probably minimizes as far as possible the danger of infection, which at least partially depends upon minute conjunctival abrasions. Let us not forget that in connection with our use of the so-called conjunctival antiseptics, any aqueous solution is diluted to approximately one twentieth of its original strength in the conjunctiva within five minutes, hence the importance of using solutions such as argyrol, mercurochrome, and the legion, of others (which may or may not have bactericidal value), not less than every thirty minutes, if any possible curative virtue is to be expected. The treatment of conjunctival infections of one sort or another is hardly an emergency and is probably best cared for by the experienced.

Among the most serious of ocular emergencies is acute glaucoma, which often begins with one sided eye or head pain and in which the cornea is usually dull, the anterior chamber shallow, the eyeball always hard to the touch, and sometimes the pupil is large. The use of pupil dilating drugs such as atropine only produce irreparable harm. Never use atropine unless you are sure that it will do no harm and that it is positively needed. Drugs which contract the pupil, such as eserine 1/5% or Philocarpin 1%, solution or ointment, should be used at least three times daily in all cases in which the eyeball is apparently too hard, until expert advice is obtained.

In conclusion, if my presentation of this rather important subject has enabled you to understand a few of the fundamentals which underlie the efficient care of even a small part of the unfortunates who have immediate need of our services, my efforts have been more than justified.

DISCUSSION

Dr. W. R. Buffington: I have been very much interested in some of the things which Dr. Bahn has said. Foreign bodies on the cornea are considered so commonplace that most of them are removed, not by a physician, but by friends and neighbors of the patient who has the foreign body. The usual method is to take a pencil, or a handkerchief, probably containing nasal secretions, and remove the foreign body, sometimes taking off the epithelium as well. Most cases get well, but a number who feel all right after removal of the offending particle wake up with a sore eye, go to a doctor and find, sometimes that they have a serious pneumococcal infection.

We know that most small foreign bodies on the cornea are situated on the epithelium only, if injured, the repair is rapid, leaving no ill effect; but during removal one may break thru Bowman's membrane, in which case you are going to cause an opacity more or less permanent. Now, if you have a little infection that goes deeper in the stroma of the cornea, you may have a small central opacity that causes a great deterioration of vision. The statistics of any well ordered eye clinic will bear me out in the statement that more impairment of vision is due to opacity of the cornea than any other lesion of the eye; therefore the importance of always taking care of these little simple commonplace affairs.

It is a practice among doctors, not so much in cities as in the smaller places, in open lesions (uncomplicated) of the cornea to use bland solutions. It has been proven by experiment on rabbits eyes that if you take an ulcer of the cornea, like a traumatic ulcer, or abrasion, and wash it out with any kind of solution, you are going to prolong instead of hastening the cure of that lesion, so the best thing is to put the eye at rest and close it with a bandage.

I want to emphasize especially what Dr. Bahn has said about subluxation of the lens. I know that a slight subluxation will, by rest and miotic replace itself; but if there is rupture of the zonule and the subluxation more pronounced, the condition grows worse and the disturbance of the nutrition of the lens is going to produce an opacity sooner or later. A great many of these cases are taken care of by general practitioners, who do not recognize some of the symptoms of subluxation. Difference in depth of the anterior chamber, slight eccentricity and displacement of the pupil.

In speaking of perforating injuries of the anterior segments of the eye and threatened perforating ulcers, I know they are emergencies, certainly the injuries causing damage to the cornea and sclera require prompt treatment. I was sorry indeed not to hear Dr. Bahn give his opinion of the conjunctival flap method; a very simple and very easy surgical procedure. I think the conjunctival flap is probably one of the best therapeutic agents we have. By its judicious and proper application, many eyes can be saved with useful vision which otherwise would be lost.

Dr. M. Feingold: Realizing fully the limitations Dr. Bahn had to apply to himself in talking on the question of injuries of the eye, I shall act in the same way and speak on one or two points only.

It might be well to emphasize the contrast of our actions in two different classes of accidents. Dr. Bahn has mentioned, and Dr. Buffington has emphasized that we should use no washes after foreign bodies in the cornea, because of the likelihood of disseminating infection into the corneal wound. It is worse still to give the patient a wash, for we must realize that he will not adopt the latest aseptic methods in using the wash. It has therefore become the accepted method to bandage the eye under the assumption that no infection has occurred at the time of the injury and that the conjunctival is free of infective organisms. This procedure gives the wound a chance to close quickly and we are thus lessening the period during which infection can occur.

Contrast this with the other occasion, in which we are using abundant fluid. In all laboratories in which chemicals are used by a number of people, faucets discharging large quantities of water at the slightest touch are placed at convenient points in the room. This arrangement has for its purpose to provide a large stream of water which

will remove and dilute quickly all chemicals that have gotten into the eye.

To sum up: In one instance we avoid washes, but we seal the eye and allow the wound to close rapidly, assuming that it is aseptic, in the other, we use plenty of fluid to remove chemicals that have found their way into the eye.

The principle of omitting washes, but closing the eye and hastening the formation of epithelium by applications of oil or ointments into the conjunctival sac, applies also to the more serious injuries. In wounds of the conjunctiva, and in perforating wounds of the sclera or cornea the physician, in the country especially, must realize that the best thing he can do is to treat the wound as if it were absolutely aseptic; he must use no washes, but he should apply a bland ointment, put on a sterile dressing and ship the patient to the nearest one able to cope with the serious situation.

Dr. Chas. A. Bahn (closing): I am indebted to Dr. Buffington for having again emphasized the importance of cleanliness in the removal of foreign bodies, for so often doctors use at least not their cleanest instruments in the removal of foreign substances from the eye. This applies especially to those who only occasionally come in contact with emergency eye practice.

The conjunctival flap method of covering the cornea was not mentioned because it is too technical for practical use by the family physician.

Dr. Feingold's contrast of the treatment of corneal foreign bodies and chemical burns, the former without washing and the latter with profuse washing is of practical importance.

PNEUMOTHORAX THERAPY IN PULMONARY TUBERCULOSIS*

SHIRLEY C. LYONS, M.D.

NEW ORLEANS.

The surgical treatment of pulmonary tuberculosis is just becoming established in this country, and in that respect we are very much behind our colleagues on the continent, particularly those in Germany.

It is my purpose to discuss the surgical treatment of pulmonary tuberculosis with special reference to pneumothorax, its indications and limitations. The procedures advocated which may be classed as surgical are:

1. Pneumothorax.
2. Apicolysis.
3. Partial thorocoplasty—with or without pneumothorax.
4. Extrapleural thorocoplasty.
5. Phrenectomy, used independently and with pneumothorax or thorocoplasty.

Pneumothorax is the remedy most extensively used for the treatment of pulmonvived the test and remains today the one ary tuberculosis. While strictly a surgical procedure, most of the work on this subject has been reported by the clinicans, as it has fallen to their lot to treat the tubercular patient. To a large extent they have been forced to fight their battle singlehanded.

With the advent of thorocoplasty the surgeons have turned their attention to the tubercular patient and are joining hands with the clinicians, realizing that those who have had a wide experience in pneumothorax have the advantage over the surgeons who have lately become interested in it as a stepping stone to the more elaborate surgical procedure of thorocoplasty. Through this association they are coming to a better understanding of its indications and contra-indications.

In 1822 the following remarkable sentence was written on the subject of pulmonary tuberculosis: "It has long been my opinion that if ever the disease is cured, and it is an advent of which I am by no means disposed to despair, it must be accomplished by mechanical means, or in other words, by a surgical operation." The writer, James Carson, the great physiologist of Liverpool, receives credit for first suggesting the use of artificial pneumothorax in the treatment of this disease. He further taught that a wound or abscess in the lung could be placed in favorable circumstances for healing, by placing the diseased lung in a quiescent state, thereby affording protection from the movements of respiration, which would be performed solely by the other lung, and the divided surfaces thus forced into close contact by the same resilient power which previously had kept them apart.

The principles which are here so clearly enunciated were, in 1888, put into practical application and employed by Forlanini, of Italy, in the treatment of pulmonary tuberculosis by the use of artificial pneumothorax.

In 1898, J. B. Murphy independently advocated the same procedure, but he gave priority to the Italian. This same principle led Brauer, in 1908, to advocate thorocoplasty for collapsing the lung in certain cases which would not permit of pneumothorax.

From our earliest records, we learn that rest has always been the recognized form of treatment for tuberculosis. To this has been added change of climate, vaccines and serum therapy, heliotherapy and X-Ray. Through all the ages rest alone has suroustanding logical procedure in the treat-

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ment of this condition. However, it must be conceded that absolute rest has its limitations in a chronic tubercular subject, and especially in an individual in any stage of the disease who is called upon to earn a livelihood. As aids to rest, there have been added many mechanical devices for securing local immobilization of the lung, such as: strapping, belts, sandbags, instruction in slow breathing, jackets of various kinds, and bandages. We need go only a step further to realize that pneumothorax belongs to this group of mechanical devices for placing the lung at rest. The simplicity and safety of artificial pneumothorax and the success which has resulted from its application necessarily make this our first choice in all cases where collapse and immobilization of the lung seem indicated. We accept the fact that the only known cure for tuberculosis is rest, admitting that nature must do the work, provided conditions are so arranged that nature has a chance. We realize that in compressing the lung we enforce rest, thus doing away with one destructive process, and affording the building forces a chance to do their work. We are led to the conclusion that the treatment of pulmonary tuberculosis by artificial pneumothorax is fundamentally correct.

The next question which naturally presents itself is the one which has caused endless discussion, and the failure on the part of the medical profession to arrive at a definite understanding has been the only great handicap to pneumothorax.

What are the indications for pneumothorax? In the earlier days it was reserved for the cases which were considered hopeless and only after every other known method had been tried. As was to be expected of any treatment, when used only in hopeless cases, the results were not brilliant, but they were sufficiently encouraging to justify some workers to try it in earlier stages of the disease. Today many of those who have given the subject time and thought have concluded that if there is any doubt as to the patient's progress, he should be given the benefit of immediate pneumothorax. It is only by adopting this course that we are going to derive full benefit from the procedure and thus save many patients from a hopeless future and inevitable death.

Our ideas on this subject are best expressed in the words of Beggs: "In tuberculosis to wait for a last chance is to wait for a lost chance, and that a decidedly earlier treatment by this method is much to be desired." Davies believes that "No case of pulmonary tuberculosis which has been diagnosed with a certainty is too early a one for treatment by artificial pneumothorax, provided there are no contra-indications." He further states that he has never regretted doing artificial pneumothorax in any case, but has often regretted his failure to do so. Shaw, Mining, Morelli and many others, including the late J. B. Murphy, share a similar opinion.

While formerly it was made use of as a last resort, at the present time it is advocated and used by the conservative worker in the following cases:

1. In repeated and severe hemorrhage.
2. In unilateral progressive disease.
3. In patients who become afebrile in sanatoriums but have cavities, sputum and bacilli persisting, even though there is limited activity of the opposite lung.
4. In chronic cases with periodic lapses into activity with the disease confined to one side.
5. To replace serous or purulent effusions in a tubercular subject.

It is our belief that some time in the future the limitations placed on indications for artificial pneumothorax in tuberculosis will be guided solely by the operator's experience and as our experience increases, the indications for its use will increase. When that time comes, the physician who sends a tubercular patient from climate to climate in search of health, and after trying everything else in his efforts to check the ravages of the disease, advises pneumothorax only as a final resort, will be regarded in the same light as the practitioner who advises a female patient to wait a few months or years before seeking surgical advice for tumor of the breast.

Contra-indications depend entirely upon what the operator considers indications. As a rule, absolute contra-indications are:

1. Extensive disease with diffuse activity in the good lung.
2. Serious cardiac embarassment.
3. Extensive tubercular processes involving other parts of the body, such as kidneys or intestines.
4. Adhesions which absolutely prevent entrance into pleural cavity in spite of repeated efforts.

The presence of adhesions which prevent the introduction of air into the pleural cavity makes a satisfactory pneumothorax impossible in two out of every three cases in which it is indicated and attempted. This is one of the good arguments for early use of pneumothorax, as the earlier we begin the treatment the less we are likely to encounter adhesions.

The best results in the surgical treatment of tuberculosis have been reported from clinics or sanatoriums where expert clinicians are associated with experienced surgeons. As a rule, pneumothorax should never be advised and instituted before consultation between at least two physicians. The patient should have had at least two months' observation under the usual sanatorium regime. Before instituting pneumothorax therapy, the patient should be acquainted with two important facts—first, that it is not a cure, but merely an aid, and that it must be continued for an indefinite period; second, the possibility of complications and the importance of prompt refills. At the beginning of the treatment the patient should be kept at absolute rest and under strict observation for at least six weeks after satisfactory collapse has been obtained, even though he has normal pulse and temperature. Initial treatment consists of small amounts of air (300 to 400 c. c. s.) at intervals of one to two days until satisfactory collapse results, which usually requires a period of 12 to 14 days. We next determine the degree of collapse best suited to the individual patient, as some require full collapse, while others do much better with only a partial collapse. We have next to discover how long the optimum degree of collapse will last without a refill, and this is best determined by X-Ray or fluoroscopic examination, as physical findings are indefinite after pneumothorax has been instituted. The amount of air to be given at each refill must be decided upon in each case, as the rate of absorption varies in different individuals. The refills should be given at intervals close enough to prevent expansion of the lung, as this might result in the formation of adhesions, and thus terminate the treatment. The object is always to keep the lung to rest. As time goes on it is usually found that the air absorbs less quickly and longer intervals may be allowed.

In the beginning, when adhesions are met with, preventing satisfactory collapse, the treatment should be continued in the hope of stretching the adhesions, and thus making an efficient pneumothorax possible. Very high pressures are not needed as the best results are obtained by giving frequent refills, leaving the intrapleural pressure constant. In the great majority of cases, the adhesions will stretch or snap without any serious consequence, and we obtain the desired results. The duration of the collapse depends on two factors: first, the extent of the disease for which it was instituted. If in an early unilateral case, it might be discontinued within 1 1-2 to 2 years, provided the patient's general condition warrants it. Second, the general condition of the patient. If the patient is not doing well, or merely holding his own, it would be unwise to give up the collapse. In such a case it is usually best to establish a permanent collapse by thorocoplasty.

Complications occurring during pneumothorax treatment are:

1. Sero-fibrinous pleurisy.
2. Tuberculosis or non-tuberculosis empyema.
3. Sub-cutaneous emphysema.
4. Air embolism.
5. Hemorrhage.
6. Spontaneous pneumothorax.

It is estimated that 50% of all cases treated over a long period of time develop pleural effusion, and that a relatively small proportion of these result in empyema. Sangeman has shown that the occurrence of effusion does not interfere with the ultimate outcome of the case. Cases which develop empyema must be treated as conditions permit, using thorocoplasty, if possible, as this is the only means of bringing pleura to pleura, thereby obliterating the pleural cavity. Subcutaneous emphysema occurs frequently and is of no consequence. Air embolism has been reported, but can be entirely avoided by the careful operator who takes the precaution always to visualize the oscillations of the manometer before permitting air to enter the pleural cavity. Hemorrhage and spontaneous pneumothorax are the result of faulty technique and can be entirely avoided.

From the above facts it is readily seen that the dangers of the treatment are relatively few. We cannot promise the patient that the duration of life will be more affected by this treatment than by any other method, but every individual familiar with the effects of a successful pneumothorax can assert that the relief from symptoms is usually so great and so prompt that it should dispel all adverse criticism. As a rule, in a satisfactory collapse, there is immediate freedom from cough and expectoration, fever, and septicemia. The bacilli disappear from the sputum in a short time. The patient is so improved that he may return to his home or his work without any fear of spreading infection or contaminating his surrounds. Moreover, the time required to affect these striking results is much shorter than that required by other methods.

We agree that the life led by a chronic

tubercular patient is not one to be envied. Indeed, there is little happiness left them beyond the mere fact of living. They are incapacitated, and are a menace to their friends and families, as well as to the community. These patients have readily welcombed artificial pneumothorax on the ground that it makes life worth living and in so doing actually prolongs life.

Pneumothorax has a field of usefulness in the treatment of bronchiectasis, central pulmonary abscess, wounds of the lung, and in certain intra-thoracic conditions for diagnostic purposes.

In the production of artificial pneumothorax we have a simple, comparatively harmless therapy, which has heretofore been used in the more hopeless cases, but which offers a useful means of controlling the disease in its early stages. In properly selected cases, relief is prompt and effective. The dangers of pneumothorax are so slight that they may be considered negligible. It is indicated in all cases of repeated and severe hemorrhage, no matter in what stage of the disease. The indications and contra-indications are based to a large extent on the operator's experience and skill.

REFERENCES

Floyd & Robinson—Archives of Internal Medicine, 1912, Vol. IX, page 452.
Barlow—J. A. M. A., 1923, Vol. 81.
Ochsner—Surgical Clinics North America, 1923, Aug., page 941.
Riviere & Romains Lancet, 1923, Vol. I.
Burrell—Lancet, London, July 26, 1924.
Archibald—Archives Surgery, 1925, Vol. X.
Singer—Archives Surgery, 1925, Vol. X.
Burrell—British Medical Journal, 1924, Vol. I.
Miller—New York Medical Journal, 1923, Vol. XXLLL.
Blanchet—Archives Surgery, 1925, Vol. X .
Young—Lancet, 1924, Vol. CCV.
Durel—N. O. Medical & Surgical Journal, 1925, Vol. 77.
Daires—Lancet, 1924, Vol. I.
Edwards—British Medical Journal, 1924, Vol. 45.
Tice—Practice of Medicine.
H. R. Edwards—Vir. Med. Journal, 1923, Vol. L.
J. B. Murphy—J. A. M. A., 1898, Vol. XXXI.
Mining—Col. Med. Journal, 1922, Vol. 9.
Law—Journal, Lancet, 1924, Vol. 44.
Shipp—Arkansas Med. Journal, 1923, Vol. XX.
Waxham—J. A. M. A., 1898, Vol. XXXI.
R. W. Matson, et al—J. A. M. A., 1923, Vol. 81.

DISCUSSION

Dr. M. J. Gelpi: The question of pneumothorax, as brought out by Dr. Lyons, is certainly of great interest and we ought to be very grateful to him for trying to stimulate interest in an old procedure which, so far as I know, has not been used to the fullest extent in our community. From all I can gather this treatment has been used by comparatively few men considering the large amount of material we have.

Some of the points in the history and development of pneumothorax are interesting. First came Dr. John B. Murphy with his epoch making paper. He read this paper dealing with pneumothorax as a possible cure for tuberculosis and shortly afterwards he went on a vacation. When he came back he was flooded with tuberculosis patients and swamped with letters. The press had taken it up in his absence and he did not know what to do with the multitude of applicants for treatment. He made up his mind then and there, that either he would continue to do surgery or devote the rest of his life to treating tuberculosis. You know his decision, and he recommended his tubercular patients to the medical men associated with him. Fifteen years after he was still talking about looking over four or five hundred cases that he had occasion to observe and was still speaking well of the results of pneumothorax.

Then, the plan of treatment went over to Vienna, from Vienna to Germany, finally coming back to this country and, judging from reports, it is receiving now (away from here anyway) a good deal more attention than it ever has before. Therefore the presenting of this paper by Dr. Lyons now, is opportune and may prove of considerable value to us. Perhaps one of the reasons why the work was not taken up more extensively here in the past, was that so many old cases were originally treated; my impression is that Dr. Durel's cases were, in the majority of instances, old cases. With a certain degree of co-operation between the medical men and the surgeons, more might be accomplished in the future. Also, if the technique is reduced to the utmost simplicity, a great deal more work is likely to be attempted.

The plan has unquestionable value as no one can doubt, who has observed the effect in hemorrhage. Undoubtedly also, in cases of deep-seated abscess, even with one or two injections in the pleural cavity, the result is striking. It would appear therefore that pneumothorax has a definite field of usefulness, and makes us feel that we ought to do more of it hereafter than we have at any time in the past.

Dr. S. Hobson: I think Dr. Lyons is to be congratulated on bringing before the Society tonight such an important therapeutic method as the treatment of tuberculosis by pneumothorax. During the past few years I have had the good fortune of seeing a number of cases of tuberculosis so treated, and of treating quite a few myself by artificial pneumothorax.

The ideal cases for this treatment are those of early tuberculosis, running high temperature and not responding to the usual method of rest, etc. To bring the temperature down a collapse of the affected lung usually gives good results, provided the lesion is unilateral, with the other side functioning well. In the case of hemorrhage, especially repeated hemorrhages, it always acts well. I have not had many such cases, but all the cases I have seen or handled myself, have responded immediately, except one, in which there was massive consolidation on one side and the bad lung could not be collapsed on account of this consolidation.

As to the indications and contra-indications, I agree on a whole with that which the doctor says. Late cases are very bad and should not be attempted because, as you know, in those advanced cases, the involvement is not unilateral but bilateral. In cases of chronic lesion (definite tuberculosis), you have some degree of cardiac changes, adhesions are very dense, and many times, it is impossible to do anything, the adhesions firmly and thoroughly connecting lung to pleural surfaces. The procedure Dr. Lyons outlined as to the dose of air is important. It is

well to give a small amount repeated in two or three days, generally 100-200 c. c. Watch carefully, while administering, paying attention to the manometer and never allow your pressure to be anything but negative.

The refills should be guided by the patient's condition. Physical examination, fluroscopic and X-Ray examinations are absolutely essential in proper handling. In cases where there are complications, serofibrinous pleurisy for instance, which I have seen in a few cases, the fluid can be withdrawn and the air introduced. Air embolism and spontaneous pneumothorax, as the doctor said, are due entirely to faulty technique It is my opinion that artificial pneumothorax when judicially used, is an important method in the handling of early tuberculosis and moderately advanced cases where there is not too much or practically no involvement of the opposite lung.

Dr. Emmett L. Irwin: Last summer it was my good furtune, at Rochester, to have the opportunity of observing in the Section of Thoracic Surgery, a great number of cases of tuberculosis in the various degrees of the disease and stages of treatment. The results were most interesting and gratifying, not only in the early cases, but in the more advanced cases as well.

I was glad to have the privilege of hearing Dr. Lyons' valuable paper tonight and believe Therapeutic Pneumothorax has a definite place in the treatment of pulmonary tuberculosis. It is progressing elsewhere and is an advance (as Dr. Guthrie has stated) that must be backed up surgically by the medical man, presenting a wonderful opportunity for co-operation between the surgeon and physician.

As far as the question of embolism is concerned—Morelli, reporting one thousand cases, believes he has almost conclusively shown by the absence of a single case of air embolism, that this phase of the subject should be eliminated from the argument. He contends that where air embolism occurs it is caused by faulty technique. We cannot help but think that the repeated introduction of needles and instruments into the pleural cavity must be associated with a certain amount of danger, however, if the procedure is cautiously and aseptically carried out, the danger is at a minimum. Unfortunately, any surgical procedure we have today is not without danger, but if carefully executed the complications and dangers are minimized.

In closing, I should like for Dr. Lyons to tell us what pressure he uses in the beginning, and what serves him as indications for the time limit of the interval between subsequent introductions of air and pressure for the same.

Dr. W. J. Durel: I think we owe the revival of artificial pneumothorax in America to a woman, Dr. Mary E. Lapham, and to Dr. M. F. Sloan. This treatment was reported at the 1912 meeting of the National Tuberculosis Association, and since that time has made quite an advance and has proven to be a valuable asset in the treatment of pulmonary tuberculosis. The consensus of opinion today, i. e., the opinion of the highest authorities on the subject is that—artificial pneumothorax should be used only in certain cases where the hygienic-dietetic treatment and accessories have failed to show any effect upon the "activity" of the lesions. The patient who is steadily improving in his physical findings and clinical symptoms does not require lung collapse, regardless of the stage of the disease. This is the opinion of the majority of authors, not that of one or two enthusiasts.

I have been using artificial pneumothorax in the Charity Hospital of New Orleans, since 1912 or 1914. At present, the dangers of lung collapse have been greatly minimized, but there is still a hazard in its use. In the last issue of the American Review of Tuberculosis, three cases of air embolism in artificial pneumothorax are reported, with one death and autopsy. The indications for lung collapse will depend upon the lung findings and the clinical and social aspects of each individual case. The time is past when lung collapse is to be used only in moribund cases; but, it certainly should not be used in the less advanced cases that are improving under other forms of treatment.

The three types of artificial pneumothorax that are mostly used today are as follows: 1st. The selective type, where only a small amount of air is introduced in the pleural cavity—this air compressing only the diseased area that has lost its resiliency. In the selective or partial collapse, the manometer readings always remain negative. 2nd. The collapse of rest, or that in which a quantity of air is introduced in the pleural cavity to equal the atmospheric pressure. Here the manometer registers close to the zero mark. 3rd. Complete collapse, where the lung is compressed to its greatest extent, and where the manometer readings are always positive.

Remember the burden of respiration falls upon the non-collapsed lung; therefore, the two first types of artificial pneumothorax do not greatly handicap the contralateral lung, and are less susceptible to cause a "reactivity" in this lung. Rest is not the only good derived from lung collapse, but drainage and fibrosis are chiefly to be anticipated as favorable results in the advanced cavity cases. In hemorrhage cases with thin wall cavities, it is difficult to determine from which lung the bleeding occurs. In a case of severe pulmonary hemorrhage in a Charity Hospital nurse, I compressed the lung showing more extensive lesions, and then to find the bleeding continuing more than ever. After decompression, I located the bleeding and found it coming from a caseous ulcer in the opposite lung which showed but a few physical signs. I certainly do not think that all cases of hemoptysis should be collapsed. However, in recurrent and incessant hemoptyses, with a free pleural spaces, it is the ideal treatment. Unfortunately, the air must be replenished every week or two weeks, and this question of refilling is taxing to one who has not the necessary assistants.

In the Charity Hospital we use hospital air instead of nitrogen. Evidently it is good air since, fortunately, we have not had a single infection. Nevertheless, we have paid strict attention to asepsis in all our cases, whether it be an initial collapse or a refill. The question of refilling is a problem to many and will remain so until we find something that will not be absorbed and that will remain in the pleural cavity without irritating the pleural layers, yet retaining a partial or complete collapse of the lung. The accumulation of fluid in the pleural cavity is not a serious complication, and I never remove a sterile fluid from the pleural cavity. I have had many who owe their life to the presence of extensive pleural effusions, which should not be interfered with, unless there is a great displacement of the heart. The first or initial compression is the

most delicate, because the pleural layers are close together; and if there are adhesions about the pleural cavity, one does not know when he has entered the pleural space until the manometer registers negative.

Rule never to be forgotten: Do not connect needle to air tank until your manometer shows a negative reading. A great trouble that often manifests itself, especially if you have a flexible mediastinum, and more so in cases where there is no fibrosis of the lung—is a displacement of the heart which leads to distressing symptoms. It is a rule adopted by most phthisiologists today, never to collapse a lung to the point where the manometer shows a positive reading. You can accomplish the same results with a negative or zero pressure. The refills must be carefully done and considered. Unfortunately, when air is once introduced in the pleural cavity it may be the cause of serious adhesions. When I was sick two years ago, Dr. Hobson was nice enough to help me with several cases previously collapsed at the Charity Hospital. However, we could not give them the necessary attention by having our refills as often as needed. The result was that these cases did badly by forming adhesions and some eventually died. Collapse of the lung causes a compression of the arterial walls and favors fibrosis of the lung—the lymphatics being enlarged in the visceral area of the lung.

I just want to say this: Back of the Charity Hospital is the Breaux Building (for tuberculosis patients). I have been trying my best to induce surgeons to help me in the performance of thoracoplasties. Dr. Gelpi, when he was house surgeon, was asked not once, but on many occasions to help us out. I have now at least twenty cases. Please ,gentlemen, come to my help. No one wants to go to the Breaux Building. I am glad to see such enthusiasm, glad to see pneumothorax revived, but next, take your coats off and give us a help, **Please.**

Dr. Shirley C. Lyons (closing): I thank you, gentlemen, for your discussions.

We are especially grateful to Dr. Durel for his remarks, as we realize that he speaks from a wide experience and from the standpoint of an expert on pulmonary tuberculosis.

My main hope in presenting this paper was to bring about a better understanding and agreement between the surgeons and internist. When that is accomplished, I think early artificial pneumothorax in tuberculosis will be established. Until such a time we must continue to disagree on some phases of this work.

As previously stated, I think the complications are negligible. While air embolism has been reported by several writers it can surely be avoided by visualizing your manometer oscillations before permitting air to enter the pleural cavity.

In regard to pressure readings—to illustrate—say your initial reading is —6 —8, at your first injection should increase this reading only 2 or 3 cc., or in other words, have a reading of —4, —6. Any sudden marked change in pressure readings should call for immediate termination of the injection. It should never be necessary to use very high pressures to obtain satisfactory collapse.

I don't think it makes much difference whether we consider this a strictly surgical procedure or not, so long as the operator exercises absolute surgical asepsis.

A PRELIMINARY REPORT ON A SIMPLE AND EFFICIENT METHOD OF TREATMENT OF FRACTURES OF THE FEMUR*

E. D. FENNER, M. D.

NEW ORLEANS.

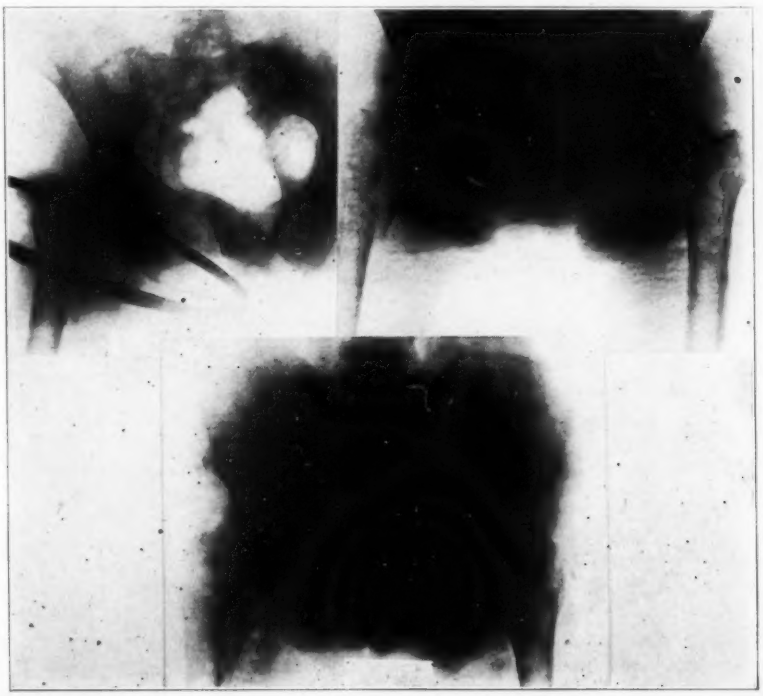
The splendid results that can be obtained by skeleton traction through calipers, or Steinman pins, and the Thomas splint, under the direction of a competent and painstaking surgeon, are too well established to require other than favorable comment. But it is none the less true that there are obvious objections and drawbacks to skeleton traction. Either callipers or pin involve a wound of the soft parts, communicating with the bone, and there is always the possibility of infection of these wounds. The calipers have a most exasperating tendency to bury one point deep in the bone, while the other escapes and hangs loose in the soft tissues, causing a great deal of pain. The ordinary pins furnished by the surgical supply houses sometimes bend, or even break, becaue of the heavy weight attached to them. In the case of the aged, the porosity of the bones detracts from the satisfaction which might be expected from the use of this method. Moreover, the Thomas splint is a much more comfortable apparatus in an illustration in a book than it is on an actual patient in bed. Particularly in women, the upper ring, which is seldom an accurate fit, gets across the vulva, impinges upon the region of the anus, and soon becomes a source of distress and a receptacle for filth. I am perfectly aware of the fact that it is possible to prevent infection of the wounds from the calipers or pin by reasonable care; that the ring of the Thomas splint can be kept out of the vulva, and protected from soiling; that patients can be treated with comparative comfort and satisfaction by this method if they are properly supervised; and that the results, both functional and anatomical, which can be obtained are admirable. But the fact remains that a large percentage of surgeons are not really qualified to use this method successfully; that infection of the wounds is very common; that the callipers often slip, or bury one point and allow the other to become loose in the soft parts; and that the final results are frequently far from ideal. I make these observations not by way of reproach

*Read before the Orleans Parish Medical Society, Jan. 26, 1925.

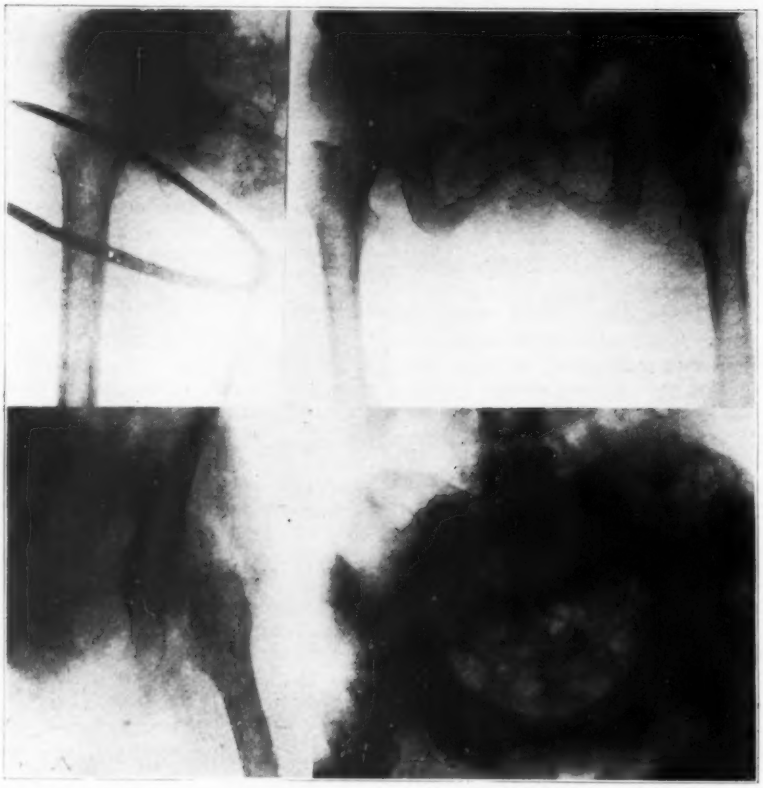
against the method of skeletal traction, but simply because they are the fact, and anyone who will walk through the wards of this or any other hospital of similar character will find no difficulty in meeting with examples of all these points. The truth is that the introduction of calipers or Steinman pins, and the after care of the patient in a Thomas splint is a major operative procedure demanding experience, training, and an attention to detail which are only too often lacking.

Criticism along the same lines must be made of the Whitman abduction spica in fractures of the hip. In spite of the dogmatic attitude of its distinguished originator, and his scorn for the imbecility of anyone who dares to criticize his method, the fact remains that the long spica in abduction is difficult to apply unless the surgeon is familiar with the use of plaster of Paris, is exceedingly uncomfortable, and is prone to leave behind it a stiff knee. Soiling of the cast by the urine and faecal discharges, and the development of bedsores are very common under ordinary hospital conditions, despite the contempt with which Whitman greets the mention of these possibilities. And the embarrassments which attend the use of either of these highly efficient methods of treatment—skeleton traction or Whitman spica—increase in proportion to the age, feebleness, and adiposity of the patient. Another consideration in connection with the use of the Whitman spica in aged and feeble patients during the torrid summer months in this climate is that under the oppression of the heavy plaster bandage, extending from axilla to the toes of the injured limb, these old people, particularly women, simply fade away from the heat.

Being in charge of a Fracture Service for white women, in which most of my patients were old, feeble, and the majority of them presenting fractures of the hip, and facing a summer which has not been exceeded for its high temperature for many years, it seemed to me that if a simple way of dealing with these cases, which involved no wound of the soft parts, no callipers or pin through the bone, no complicated system of weights and pulleys, no trussing of the patient in an extensive plaster of Paris thermophore, and which was so easy to apply that even a man without experience could use it with little danger of going wrong: I say that, if such a method



Case 1—Inter-Trochanteric Fracture (a) on admission 8-22-1924, (b) 9-27-1924, (c) Final result Feb. 1925



Case 2—Intra-Capsular Fracture (a) just after admission, 11-4-1924, (b) Eleven days later, 11-15-1924, (c) 12-20-1924, (d) Final and unsatisfactory result, Feb. 1925.

could be found and could be shown to give good results, something worth while would be realized.

An article by R. Hamilton Russell, of Melbourne, Australia, in the British Journal of Surgery for January, 1924, on the treatment of fracture of the femur, appealed to me as a model from the point of view of lucidity, excellent English, and calm confidence in the results of an extended experience. The method proposed is simple and can be applied by any man of ordinary intelligence. The exposition of the method is seductive to the mind, and appealing to the ear of the reader. I propose to quote at some length the words of the writer. He says:

"In the case of a fractured femur, how will the surgeon manipulate the limb to draw out the thigh muscles, and reduce the fracture? He will do it in the following way: Standing by the side of the bed he passes his left hand under the knee; the right hand grasps the leg just above the ankle. Now he gradually exerts a little power, the right hand pulling horizontally towards the foot of the bed, the left hand up towards the ceiling mostly, but with a slightly inclination towards the foot also. The direction of the forces being exerted by the surgeons hands are indicated by the arrows in the picture.

The limb will not come out to its proper length all at once, but the patient will feel more comfortable, and will instinctively know that his limb is being skillfully and properly handled."

"The surgeon now reasons thus: I am sure that this is the proper way to get the limb out to its proper length if only the thigh muscles are quiescent; but they are not, owing to the patient's apprehension and fever. Were I able to stand here doing this for a few hours, or until he sleeps, then ther e would be no difficulty but obviously this is impossible. I must then devise some means of doing what I am now doing; something that will not tire, that will make the limb absolutely comfortable, and in that way favor the return of mental quietude.

"The apparatus: The arrangement

Case 3—Intra-Capsular Fracture (a) admission 12-12-1924, (b) 12-19-1924, (c) 1-24-1925 (d) Showing an actual Coxa Valga

Case 4—Intra-Capsular Fracture (a) On admission 12-13-1924, (b) showing correction of deformity, 1-25-1925, c) showing partial relapse, 2-18-1925

shown in Fig. 2 was evolved in the way just described—a sling beneath the knee corresponding to the surgeon's left hand, and horizontal traction on the leg, corresponding to the surgeon's right hand. The arrangement provides that the pull on the leg shall be nominally double the upward lift at the knee, although actually somewhat modified by friction between pulleys and cord. The special apparatus required is as follows:

1. An ordinary overhead head to foot bar that can be shifted laterally as required. This can be fitted to the ordinary four post frame; but a convenient way is to use merely two uprights at head and foot respectively, securely lashed to the bedstead.

2. An arrangement to which may be attached a couple of pulleys beyond the foot of the bed. These pulleys should be in a horizontal line with the foot of the patient when the leg is lying horizontally on a pillow with the heel just clear of the bed. A convenient wooden or iron bracket can easily be made by the carpenter or splint maker.

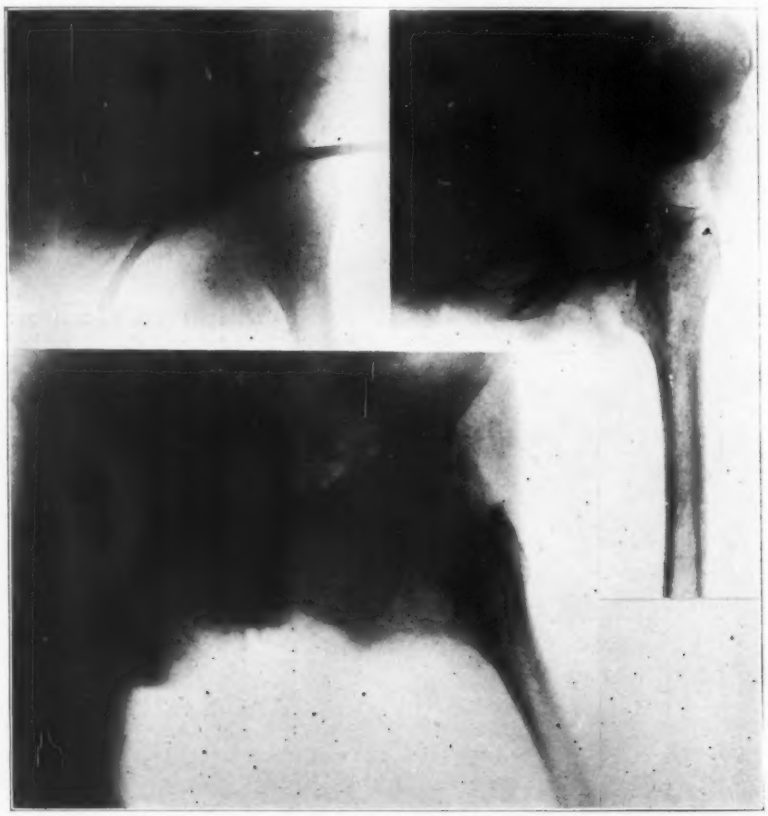
3. Four pulleys, and suitable cord."

"Application of the apparatus: An anaesthetic is not necessary.

1. The leg having been prepared in the ordinary way is fitted with traction straps and a spreader or stirrup close to the sole of the foot by a method similar to that used in Buck's Extension, but with two important differences: (a) The strapping is not carried above the knee; (b) The spreader is provided with a pulley.

2. The placing of the pulleys: First, pulley A is tied to the overhead bar in such a position that a vertical dropped from it shall meet the leg well below the knee. Pulleys B and C are to be attached to the bar below the foot of the bed; pulley C is that attached to the spreader.

3. The knee sling is now passed beneath the knee, which has all this time been lying comfortably on a pillow. The sling should be broad and soft, a rough towel suitably folded answers well. The ends of



Case 5—Intra-Capsular Fracture (a) on admission 12-22-1924, (b) 1-24-1925, (c) 2-19-1925, after removal of traction

Case 6—Inter-Trochanteric Fracture (a) 10-24-1924; on admission, (b) 11-22-1924, (c) 12-20-1924

the sling are now securely tied together with the cord, which is then passed through the pulleys in the following order: (a) Up to pulley A; (b) To pulley B beyond the bed; (c) To pulley C on the spreader; (d) to pulley D (companion to B).

4. The surgeon now stands at the foot of the bed and slowly tightens up everything, and then the weight is attached. He next takes a soft pillow and adjusts it comfortably beneath the thigh to prevent gravitational sagging at the seat of the fracture. Care must be taken that the pillow is really soft; a common fault is to have too hard and tightly stuffed a pillow for this purpose. Next he looks to the heel; it must not be touching the bed, and he arranges another soft pillow beneath the leg and Tendo Achilles to prevent it from doing so. And now the patient will be absolutely comfortable, and rest of both mind and body (including the thigh muscles) will come to him. Finally careful measurements are taken from the lower extremity of the anterior superior iliac spine to the upper margin of the patella on either side. Quite possibly, especially if the manipulations have been leisurely and quiet, the length will already be nearly normal."

"Our teaching may be stated thus:

1. In a limb previously normal that is rendered perfectly comfortable in a natural position, muscular action is never the cause of displacement of fragments.

2. The causes of malposition of fragments are three in number, viz: (a) Unnatural position and discomfort; (b) Action of gravity; (c) Splints. To recapitulate; in fracture of the femur, given a method of pulling out the thigh muscles to their normal length by an appliance that is perfectly comfortable, nothing will then remain to be done except to counteract the effect of gravity at the seat of fracture."

"We ought to disregard the proximal fragment altogether, and place the limb in a position which we know to be natural and comfortable, with the assurance that the position which is natural and comfortable for the entire limb will be equally so for the proximal fragment in common with the rest, and that such position will be that which it will assume.

"Muscles are the creatures of habit and the slaves of custom. In a broken limb, every muscle and muscle fibre will co-operate in the endeavor to preserve the position to which it has always been habituated, and the last thing a muscle will do will be to abuse its liberty by displacing a fragment into an unnatural and unaccustomed position. Hence the remarkable circumstance that with our methods faulty alignment (other than that induced by gravity) is practically never seen, although great liberty is permitted.

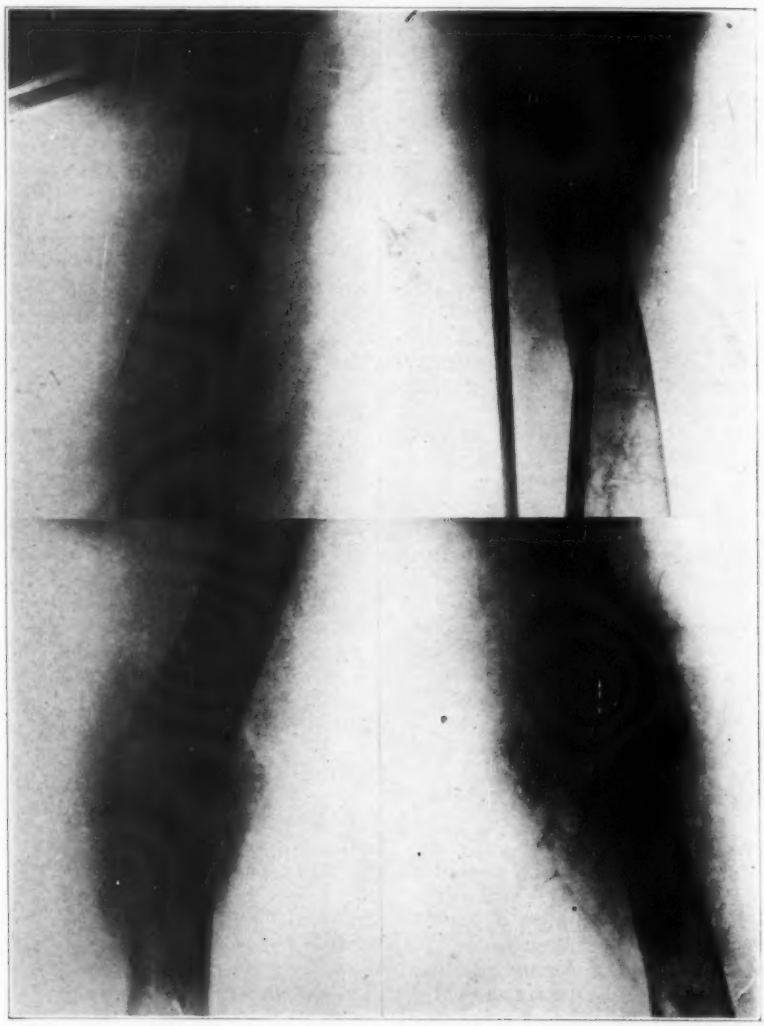
"It follows, moreover, that whether the fracture is in the middle, the upper, or the lower third, the treatment is exactly the same; the position of the limb and the mode of extension is equally appropriate in all three cases.

"It has become very clear to us that the general behavior of fractures treated in this way contrasts favorably with that usually seen where more 'restrictive' methods are employed. I can only explain it by suggesting that all the tissues of the limb notably the muscles and bones, preserve their nutrition better when laid upon a pillow

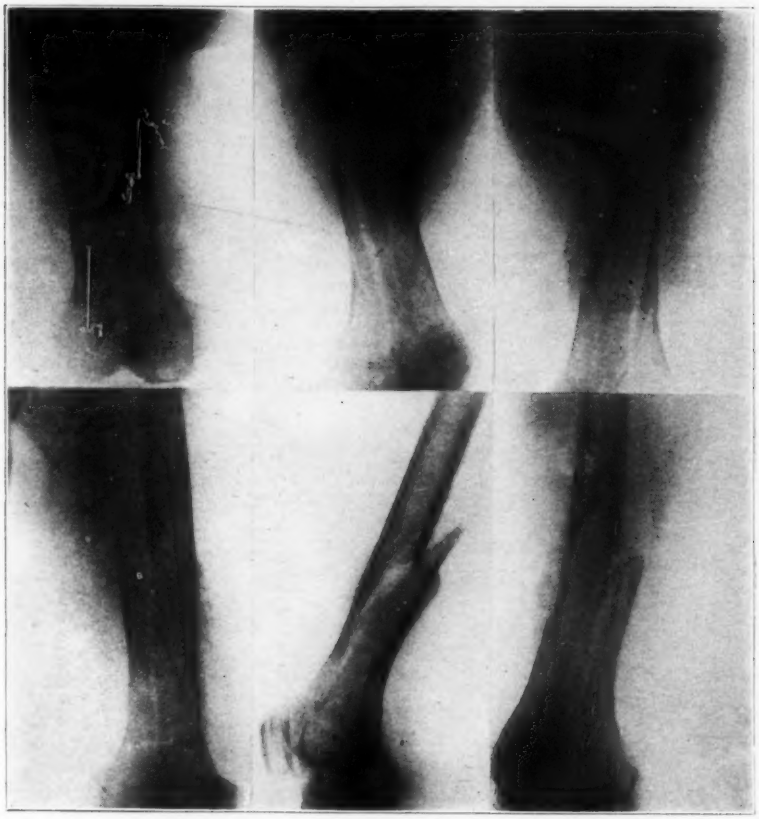
with considerable freedom of motion, than when subjected to the compression associated with splints and bandages. I think that union takes place more rapidly than of old, and the patient is certainly up on crutches earlier and the crutches are discarded sooner. Among other things I have been struck with the remarkable rapidity with which consolidation takes place, so that the fracture will pass from almost no union to firm union in the course of a week.

"Newly born and very young children are treated in this way at the Children's Hospital. When two years ago I first saw a tiny infant lying in a cot rigged up with liliputian pulleys and string, and was amused thereat, the Sister was so emphatic and serious in her approval that all doubt was at once banished, and no other method has since been even thought of. The nurses find that such patients give no trouble, and are tended and washed with the utmost ease and comfort.

"One more word as to the significance of comfort. Comfort is the first essential in the treatment of a fracture. No apparatus that is not perfectly comfortable can be a good apparatus, for the muscles will never be at rest, but will be always striving to achieve a position of greater comfort. Moreover, there is, I am convinced, a direct relation between comfort and rapid union,



Case 7—Fracture Middle 3rd left femur (a) A-P view, 11-21-1924, just after admission. (b) Lat. view, 11-21-1924, just after admission (c) and (d) A-P. Lat. view, 12-13-1924.



Case 8—Fracture Lower 3rd Femur (a) 12-30-1924, (b) 1-7-1925, (c) and (d) 1-24-1925 (e and f) 2-7-1925

and an equally direct relationship between discomfort and delayed union, feeble union, and non-union. Explain this as we may, I have no doubt whatever about the clinical fact as a matter of bedside observation. Therefore let us never be content with any means, no matter how ingenious and complicated, and satisfying to our theoretical preconceptions, that is not perfectly comfortable."

Of the claims made in these extended quotations, gentlemen, it may be said "These be whirling words," and the only way to settle the question of their truth is to submit them to the test in the crucible of our own experience. I therefore determined to try out the method upon the cases presenting themselves for treatment in my fracture service. I have made no selection of cases. With the exception of three cases of fracture of the neck of the femur, whose physical condition, comparatively slender physique, and age, seemed to me particularly suitable for the Whitman spica, and which I thought might be used as a check upon the new method, every fracture of the femur admitted to my ward has been treated by this "Quadruple pulley traction," and is reported in this preliminary record. Most of them are still under treatment, or are too recent for the final functional result to be known. Whether, or how well, they are going to walk I do not know. All I can do is to submit the skiagraphic records, which seem to show satisfactory position of the fragments, and supplement this by stating that stiffness of the knee has not been troublesome; that union appears to have been solid and rapid; and that considering the circumstances, these old women have been throughout the treatment remarkably comfortable. Since the application of the method to the first case on August 24, 1924, until today (Jan. 26, 1925), there has been but one death, and this occurred in the case of an old woman over 80, who from the beginning made no effort to control her bowel or bladder, who was very deaf, and exhibited always a marked hebetude. She was final-

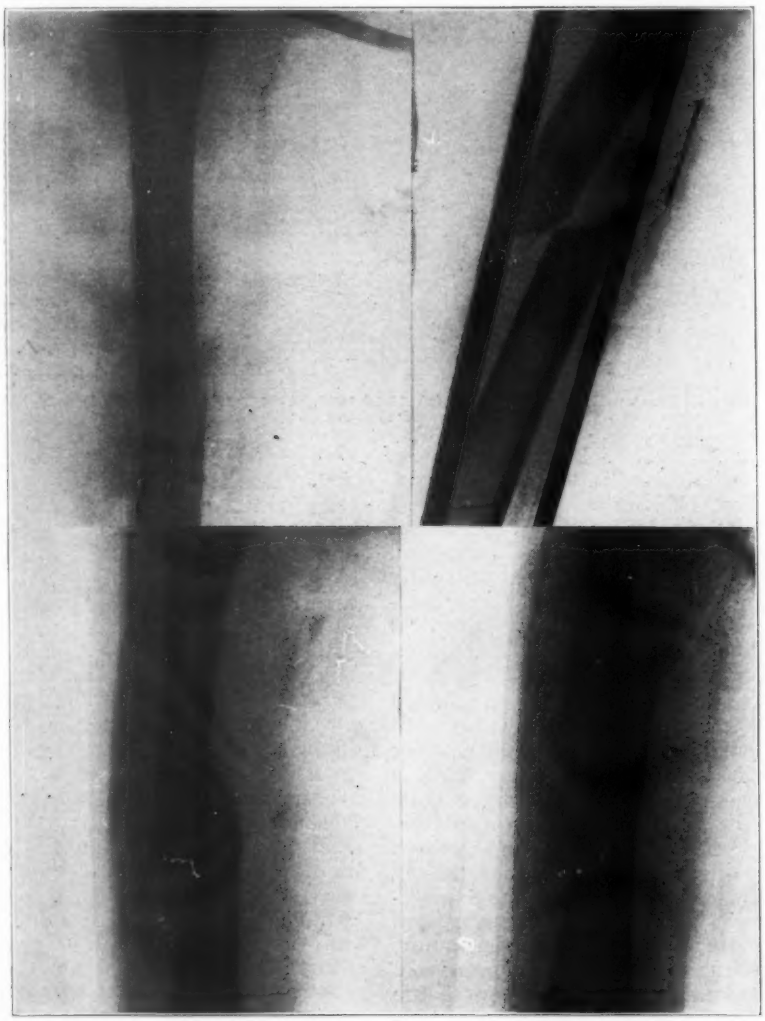
ly carried off by a hypostatic pneumonia after the traction had been removed. I shudder to think what would have been the task of her nurses in dealing with the foul mess of urine and faeces if I had attempted to treat her with a Thomas splint.

Let me now throw upon the screen the skiagraphs illustrating the effect of this method upon the position of the bones. But before doing so let me state that the maximum weight used in any of these cases was eight pounds, and in most of them not more than six. The illustrations are supplemented by brief records of the cases so far treated.

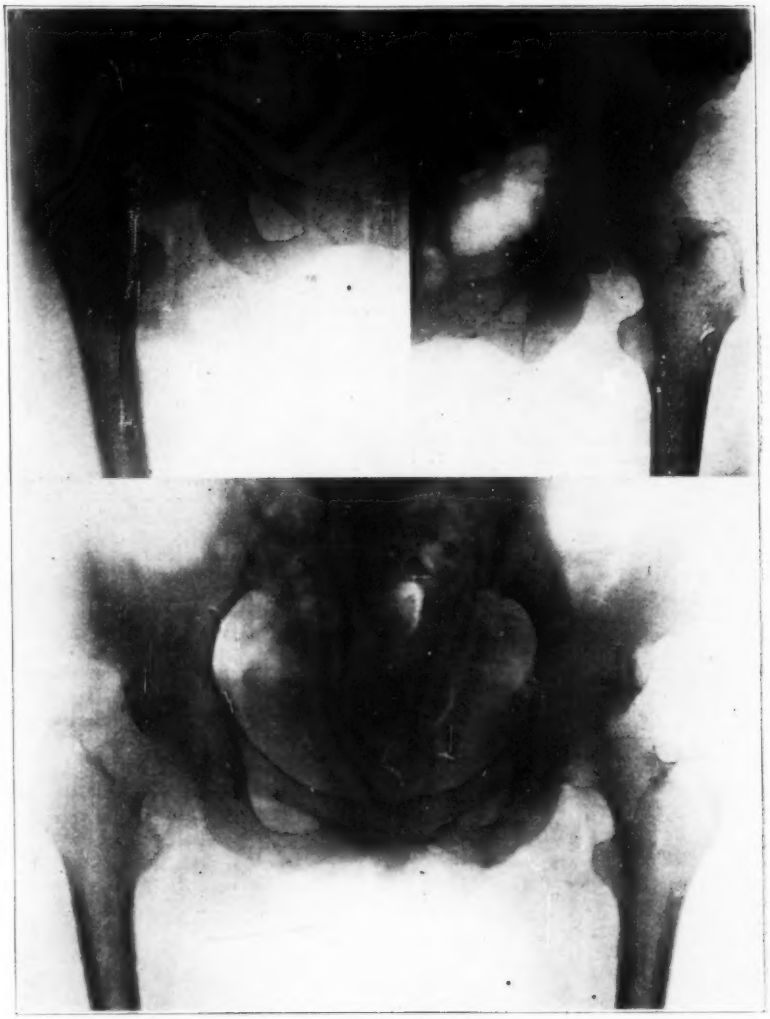
Finally I wish to say that I realize that nine cases as recent as mine cannot be held to justify a definite conclusion as to the true value of this method, but it has been my hope that by thus calling attention to it, others engaged in this work might be induced to test it, and that in this way a sufficient number of results might be accumulated to warrant a verdict.

CASE 1.

Katherine K—., age 77 years. Admitted August 19, 1924. Diagnosis; Inter-trochanteric fracture, right femur. Lantern Slide No. 1, taken 8-22-24, before reduction. Lantern Slide No. 2, taken 9-27-24. Quadruple pulley traction put on 8-24-24. Removed 11-8-24. Patient able to walk, and has no pain. The result appears very satisfactory. Patient discharged with solid union on Dec. 9, 1924.



Case 9—Fracture Middle 3rd Femur. (a) 7-15-1924 Ant-post view just after admission, (b) 7-15-1924, same, latnal view, (c) catual view, (c) 8-23-1924—lateral view.



Case 10—Intra-capsular Fracture, treated with Whitman Spica, (a) taken 10-29-1924, (b) 11-6-1924, (c) Final result, 1-24-1925

CASE 2.

Mrs. Mary S—., age 75. Admitted Nov. 4, 1924. Diagnosis: Intra-capsular fracture left hip. Thomas splint which was applied in accident room had to be removed on Nov. 7th, owing to pain and threatened pressure sore. Lantern slide taken Nov. 4th (No. 3) just after admission. Quadruple pulley traction applied on Nov. 7, 1924. Lantern slide taken 11-15-24, showing reduction. (No. 4). Lantern slide No. 5, taken 12-20-24, showing condition 46 days after injury. Patient discharged Jan. 2, 1925. Is not yet walking.

CASE 3.

Mrs. Octovia G—., age—. Admitted Dec. 12, 1924. Diagnosis: Intracapsular fracture left hip, received 3 weeks before admission, during which time she had no treatment. Lantern slide No. 6, taken just after admission. Quadruple pulley traction begun on Dec. 15th. Lantern slide No. 7, taken Dec. 19th, showing effect of traction skiagraph taken Jan. 24, 1925. Still under treatment.

CASE 4.

Mrs. Angelica L—., age —. Admitted Dec. 12, 1924. Diagnosis: Intracapsular fracture left hip. Lantern slide taken Dec. 13th, in Thomas splint (No. 8). Quadruple pulley traction applied Dec. 14th. Lantern slide No. 9, taken Dec. 20th, showing effect of traction. Skiagraph No. 40646-A, taken Jan. 24, 1925. Patient still under treatment 45 days after accident.

CASE 5.

Mrs. Kate R—., age 64 years. Admitted Dec. —, 1924. Diagnosis: Intracapsular fracture right hip. . Skiagraphs No. 39532-A, taken Dec. 22, 1924. Quadruple pulley traction applied.

Skiagraph No. 40649-A, taken Jan. 24, 1925. Still under treatment.

CASE 6.

Elizabeth C—., age 80 years. Admitted Oct. 23, 1924. Diagnosis: Inter-trochanteric fracture right femur. Thomas splint replaced by Buck's extension. This was inefficient as the weights were resting on the floor much of the time. Patient had no control of bowel or bladder. Very deaf, and stupid. Very hopeless case. Lantern slide No. 10 taken Oct. 24th. Quadruple pulley traction applied Nov. 15th. Removed Jan. 2, 1925. Lantern slide No. 11, taken Nov. 22nd. No. 12, taken Dec. 20th. Patient died Jan. 13, 1925 of hypostatic pneumonia.

CASE 7.

Mrs. Frank B—., age 42 years. Admitted Nov. 20, 1924. Diagnosis: Fracture middle 3rd left femur. Lantern slide No. 13 taken Nov. 21st. No. 14 same date. Lantern slides Nos. 15 and 16 taken Dec. 13th. Discharged Dec. 26th, with solid union.

CASE 8.

Mrs. Lena R—., aged 69 years. Admitted Dec. 26, 1924. Sent to ward with diagnosis of Pott's fracture in a gutter splint going well above the knee. Fracture of femur detected and confirmed by skiagraph. Skiagraphs taken Dec. 30th,

CASE 9.

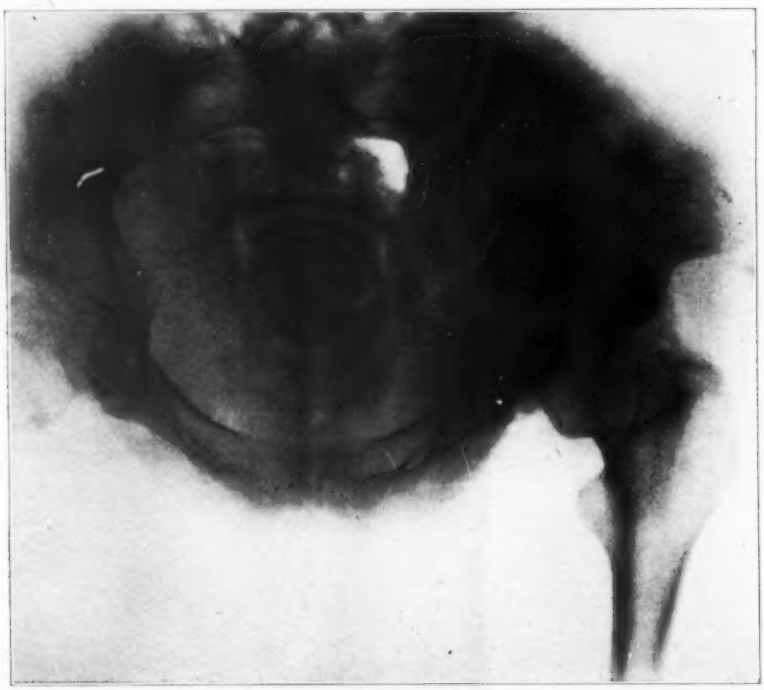
Herbert H—., aged 12 years. Was struck by a wagon on about June 17, 1924. Taken to Charity Hospital, and Thomas splint applied for fracture middle 3rd left femur. After a few days Z.-O. produced exceriation and had to be removed. He lay with limb simply supported by Thomas splint, but without traction, till July 30th, when he was taken to his home. Quadruple pulley traction applied by me on Aug. 1st. Skiagraphs taken at Hospital. Aug. 23rd traction removed. Union was firm. Short spica applied Aug. 23rd. Skiagraph just before case was put on, Aug. 23rd. Spica removed Nov. 5, 1924. Solid union.

CASE 10.

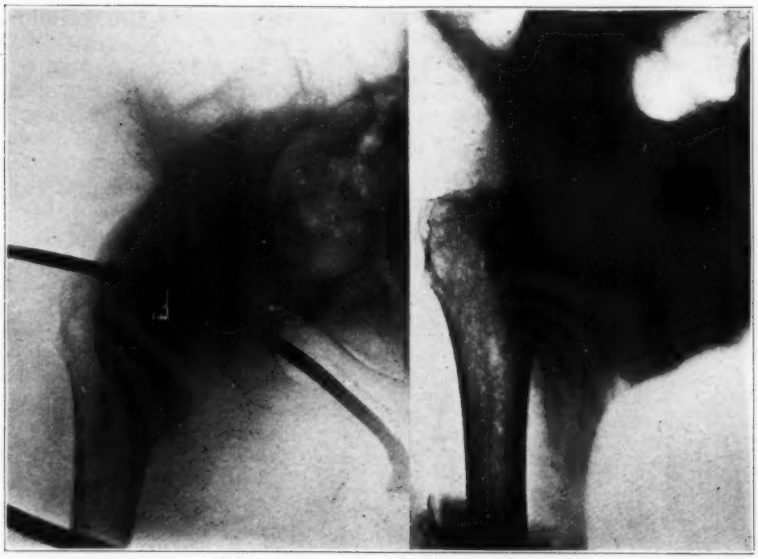
Miss Regina T—., age 48 years. Admitted Oct. 28, 1924. Intra-capsular fracture right hip. No. 5th Whitman spica under general anesthesia. Nov. 20th window to relieve pressure over patella. Jan. 3, 1925, spica removed. Knee stiff. Manipulation under ether Jan. 13th. Physiotherapy ordered. Lantern slide No. 17 Oct. 29th, 1924. Skiagraph Oct. 29th. Skiagraph through spica taken about Nov. 6th. Skiagraph taken Jan. 24, 1925.

CASE 11.

Viola B—., aged 32 years. Admitted Oct. 19, 1924. Fell from a chair on Oct. 5th. and was unable to use her right limb. Examined at Hospital, and no fracture detected. Sent back by her physician for re-examination on Oct. 19th. when an intra-capsular fracture of right hip was diagnosed. Thomas splint was replaced by a Whitman spica on Oct. 29th. (Dr. Battalora). This broke across the groin, and was replaced by me about the middle of November. Spica removed, and manipulation to relieve stiffness of knee on Jan. 13, 1925. Still under observation, and getting physiotherapy. Lantern slide No. 18 taken Oct. 25, 1924, and No. 19 taken Dec. 27, 1924. Skiagraph.



Cass 11—Intra-Capsular Fracture. Final result of treatment by Whitman Spica—good union.



Case 12—Intra-capsular fracture Whitman Spica applied Nov. 22, 1924; Quadruple Pulley Tractor, Dec. 26, 1924, on account of Bedsore on Back. (a) on admission, 11-20-1924; (b) 1-24-1925

CASE 12.

Miss Agnes O—., aged 74 years. Admitted Nov. 20, 1924. Diagnosis: Intra-capsular fracture right hip. Whitman spica Nov. 22nd. Very thin with senile kyphosis. Pressure sore on back. Spica removed on Dec. 15th. Buck's extension applied Dec. 26th. Quadruple pulley traction substituted. Still under treatment. Skiagraph taken Nov. 20th and Jan. 24, 1925. Still under treatment, eight and a half weeks from injury.

DISCUSSION

Dr. I. Cohn: It is very gratifying indeed to have heard Dr. Fenner's paper, as it seems to show us that there is a definite trend towards a simpler method by which any one with mediocre ability and very little at his command can do as well in a small place as a man in a well organized hospital.

In a recent article which impressed me (Annals of Surgery, January, 1925)—Dr. Rixford discussing spiral fractures of the femur makes the statement that while he still uses operative measures in some cases the operator must be sure of his asepsis.

We welcome the simple method as outlined by Dr. Fenner, but with bowed head and reverence think of Whitman who has taught us the underlying principle on which is based the modern treatment of fractures of the femur and, while utilizing the newer way, we should not too rapidly discard his methods.

Dr. Muir Bradburn: The case whose skiagraphs were exhibited by Dr. Fenner came to us about three weeks after injury with callus already present. You can stretch callus but you cannot compress it. We felt justified in letting this patient leave the hospital as there was excellent callus although the fragments were in the position which you see in the skiagraph. This patient, seen by me two years after the accident, had no shortening, no apparent deformity, with 100 per cent flexion of the knee, and no functional disturbance. It is due to Dr. Fenner's enthusiasm and the excellent results which he is obtaining in his service that we have adopted in our service the Australian method of treating certain femur fractures. However, we recognize certain indications and contra-indications. We believe it particularly indicated in the inter-trochanteric and intra-capsular fractures. So far we have not used it in children as the plaster cast has been found a convenient method of treatment. In shaft fractures in young adults at the present time we believe that the skeletal traction is the method of choice. In old people we hesitate to use skeletal traction as old bones do not stand traction with foreign material very well. In Dr. Russell's paper no statistics are given, no skiagraphs are shown of the results of shaft fractures, consequently we are unwilling to adopt this method in this type of fracture in young adults. In certain supra-condyloid fractures it is, I believe, contra-indicated, as is illustrated by a case now under treatment in which the lower fragment is displaced anteriorly. In such a case the sling under the knee would exaggerate the deformity. I am showing these skiagraphs which explain our method in treatment of fractures of the femur.

Case No. 1. Intracapusular fracture in an old man. This is treated by the Australian method and we see that there has been an anatomical reposition.

Case No. 2, is a supra condyloid which is treated in a plaster cast.

Case No. 3, a shaft fracture in a young male adult and in this we have employed skeletal traction with practically anatomical reposition. If we can be shown that such method can be obtained by the Australian method of treatment of shaft fractures we would be only too glad to adopt it.

In addition to the case shown we have under treatment in the service at present two intra- trochanteric fractures which are treated by the Australian method; one intracapsular fracture in

a plaster case, and one other shaft fracture in a young adult which was treated by skeletal traction by means of a Steinmann pin. Although Dr. Russell states that this method is indicated in compound fractures, with the experience in only one case, I have found this decidedly inferior to skeletal traction.

Dr. E. D. Fenner (concluding): Just a word to call your attention again to the fact that this is only a preliminary report, as I have had a little less than four months to make the trial of this method. I do not know whether or not the "whirling words" of Dr. Russell are going to stand the test.

I have been endeavoring to get Dr. Bradburn, and others in charge of a fracture service interested. I have had but three cases of fracture of the shaft of the femur. In two the results have been excellent. In the third, which is a splitting fracture of the lower third, it looks as if the result was going to be very good. We get very few fractures of the shaft in my service, but if Dr. Bradburn and the others who have fracture services will try this in fractures of the shaft in young adults, we will soon find out whether the method is what has been claimed for it.

In conclusion I need hardly say that no one could be more fully aware of the value of Whitman's method in fractures of the neck of the femur, or more appreciative than I am of the debt of gratitude due him for his demonstration of the fact that union need not be despaired of in this region, no matter what the age of the patient.

AURICULAR FIBRILLATION*

CHAILLE JAMISON, M.D.

NEW ORLEANS

Mr. Chairman and Gentlemen:

It is my privilege to address you this evening on a subject which has become of widespread interest to the medical profession in recent years. Auricular Fibrillation is of more particular interest to the internist, but, due to its great incidence, it must arrest the attention of the surgeon and the specialist. This cardiac disease is one of the oldest clinical conditions that has been observed and recorded by physicians of the past; it has been known as "delerium cordis," "pulsus deficiens," "pulsus irregularis," "mitral pulse," etc. The credit of separating this type of disordered myocardial function belongs largely to the older Mackenzie, who, in 1902 pointed out the constant association of the "ventricular form of mitral pulse" and complete irregularity of the ventricle. At this time he thought the condition due to complete paralysis of the auricle. The real explanation of this completely irregular heart was first made clear by the studies of Thomas Lewis, using the Electro-cardiogram. I would like to call your attention to the fact, however, that this disease was first observed, diagnosed, and treated in the clinic, and that the laboratory served, and still serves, only a secondary and confirmatory position.

In order that we may understand the irregularities of the heart, and thereby recognize myocarditis, it is necessary to review briefly the modern conception of the physiology of the heart impulse. As a result of the physiological investigation of the last two decades the theory of the neurogenic origin of the heart action has been opposed by the view that the source of the rhythmical contractions is to be found in the heart muscle itself. This is known as "myogenic theory." According to this theory, the stimulus arises, not in a nervous center, but in the muscle cells of the heart and is conveyed to the successive portions of the heart, not by the nerve fibrils, but by the cells of the contractile tissues itself. The muscle cells of the heart possess five properties: stimulus production, stimulus conduction, excitability, contractility and tonicity. At the junction of the superior vena-cava with the right auricle, there is a specialized bundle of cells known as the sino-auricular node or "pace maker," in which the normal stimulus to contraction originates; the contraction passes down the auricles in a wavelike manner, and is transmitted to the ventricles by another specialized collection of cells located between the auricle and ventricle, and known as the auriculo-ventricular node, or the ganglion of Tawara, which, in turn, sends the stimulus to all parts of the ventricles by another specialized collection of neuro-muscular cells passing to all parts of the ventricles and known as the cells of Purkenge. In health this complex mechanism comes into play, developing a full cardiac cycle 72 times each minute; it is what produces and controls the pulse.

If you will consider that through the centuries we doctors have placed our greatest reliance in diagnosis and prognosis on the pulse, you can readily understand that we have unknowingly depended on the marvelous delicacy of this apparatus to respond to any change in the organism and make this change known to us by alterations in the pulse rate. How serious must it be then, when this mechanism itself breaks down. It is my purpose to attempt to outline to you how we may recognize such a break-down and then bring about its repair.

The clinical recognition of Auricular Fi-

*Read before the Staff of the Mercy Hospital, September, 1924.

brillation depends on the demonstration of a complete irregularity of ventricular contractions, which of course, results in a complete irregularity of the pulse, and usually the diagnosis can be made by palpating the radial pulse alone. Complete irregularity means irregularity as to rhythm, as to force, and as to sequence. A pulse may be very irregular, due to constant repetition of the same irregularity, as in repeated extra-systole or in sinus arrythmia, and this never occurs in Auricular Fibrillation. The irregularity of the ventricle may be more marked on auscultating at the apex, and the combined procedure of auscultating the heart and feeling the radial pulse is very useful, as it often demonstrates a pulse deficit, many of the ventricular contractions being too weak to lift the semi-lunar valves. In the vast majority of cases the pulse is rapid, though cases with a slow pulse are on record.

The count at the apex is frequently greater than at the pulse; a persistent irregularity of the radial pulse and of the ventricle at the apex, especially with an increased pulse rate means auricular fibrillation. In a patient where mitral stenosis has been known to exist, the development of an irregular pulse nearly always means auricular fibrillation. Where a mitral systolic murmur is present, it persists with a slow rate but disappears with a rapid rate. The presence or absence of aortic murmurs depends upon the strength of individual beats. In mitral stenosis, the short presystolic murmurs, present with regular heart action, disappear with rapid fibrillation, but if the diastolic murmur is long and rough it persists with fibrillation. If the heart rate is slow this murmur may be early diastolic and suggest aortic regurgitation, but a diagnosis of aortic regurgitation in slow auricular fibrillation should not be made from a murmur alone, especially if confined to the region of the apex. The other signs must also be present, as a diastolic murmur at the second cartilage, the water hammer pulse, and increased pulse pressure. Where the pulse appears irregular, but not much above normal, especially if there are no signs of cardiac failure, the reaction of the heart to increase in rate should be studied. Now, the pulse rate may be increased by exercise or by a whiff of amyl-nitrite, and with the increase in rate the irregularity increases in auricular fibrillation, whereas with an irregular pulse due to extra systole or partial heart block, an increase of heart rate steadies the action. This irregularity is present in about 50% of cases of cardiac failure with dropsy; it also comprises 50% of all irregularities. It can be diagnosed clinically with certainty in 90% of cases, the remaining 10% requiring instrumental or graphic methods.

Mechanism

Auricular Fibrillation is due to the cessation of the normal rhythmical auricular contraction, which is replaced by delirium of the muscle, because the normal stimulus arising in the sinus node is overshadowed by stimuli which arise at abnormal points, then pursue the so-called circus movements; thus the auriculo-ventricular node is bombarded by many and irregular impulses, which are thence conveyed to the ventricles by the bundle of His and the cells of Purkenge, resulting in the complete irregularity of the ventricular contractions.

Pathology

There is no specific pathological lesion characteristic of this disease, though the evidence of chronic and acute inflammation of the myocardium is always present.

Prognosis

In those cases in which auricular fibrillation occurs for the first time and which present no other evidence of cardiac disease, the immediate prognosis is good; the ultimate prognosis will largely depend on the extent of the accompanying myocarditis. In those cases of old myocarditis with dilatation, where the onset of fibrillation is late in the course of the disease, the irregularity is of the gravest significance; where it has been present from the onset of the failure, it may be of good omen, as these are the cases of dilatation which respond the most readily to Digitalis medication. In the cases of recurrent fibrillation, with or without dilatation, those cases not controlled by Quinidine medication give only the gloomiest outlook. Aside from any other pathology, the time at which the normal rhythm is restored, whether by treatment or spontaneously, is always fraught with danger from the sweeping out of emboli from the auricular appendices.

Treatment

That Quinine and Quinidine can slow the heart was known as early as 1853, but it was not until 1914 that Wenckbach accidentally found that it abolished auricular fibrillation; Frey in 1918, experimenting with the various alkaloids, found Quinidine to be the best. When beginning

treatment it is wise to give a small dose, about 3 gr. and wait a few hours to observe any idiosyncrasy. The drug should then be given in 4 gr. doses every four hours until the irregularity is abolished, or for several days, and it is fruitless to keep it up over five days. Ordinarily, in the successful cases, the desired reaction will occur within 48 hours. This specific remedy should be used in all cases of auricular fibrillation, without idiosyncrasy, whether there is or is not compensation, although brilliant results are far more likely to follow in those cases without broken compensation, the presence or absence of valvular lesions should not deter the medication, and the height of the blood pressure need not be considered. Quinidine acts by slowing the auricle through re-establishing the control of the sinus node, and it can do this because the drug is depressing to the muscle cells of the auricle and breaks up the circus movements by prolonging the refractory period. Sudden death sometimes occurs; this happens just as the normal rate is re-established, and is said to be due to the sweeping out of emboli which have formed in the non-contracting auricle, when its normal contractions have been re-established.

When the first publications concerning this drug warned against using it after, or in conjunction, with Digitalis, this was a mistaken idea or observation, and the two may be used in conjunction or sequence, without hesitation. The most desirable combination of the drugs has not been worked out, and I have seen no observations of its use by the intravenous route.

SYNOPSIS OF A LECTURE ON THE CANCER PROBLEM IN FRANCE*

PROFESSOR G. JEANNENEY

Surgeon to the Hospitals and Professor Agrege of the Medical Faculty of Bordeaux.

BORDEAUX, FRANCE

In France, the cancer situation is regarded as a national problem, and the manner in which it is dealt with by the Government is interesting from the administrative as well as the scientific point of view. The struggle against the evil of cancer in France is now directed by the state thru an official organization which was brought into effective existence by the efforts of Senator P. Strauss, Minister of Health and Sanitation, with the co-operation of Professor Bergonie, the well known radiologic expert, and Dr. Hartmann, President of the "Franco-Anglo-American League against Cancer." Thru this agency the government has established special cancer hospitals in all the large university centers, where the professors and specialists in every department concerned (surgeons, physicians, electrotherapists, radiologists, biologic chemists, etc.), co-operate as members of the staff.

After discussing the sociologic aspect of the problem (the propaganda for the better education of the public and the special instruction of the medical classes), Prof. Jeanneney dwelt in detail upon the organization, administration and construction of a cancer hospital, taking as his model the Cancer Hospital of the University of Bordeaux. In dealing with the therapeutic aspects of the problem, he briefly reviewed the most salient features of the modern treatment of cancer, laying stress upon the surgical treatment as by far the most effective in the vast majority of cases. But surgery has its limitations and unfortunately, in view of the advanced progress of the disease in many of the patients who apply for treatment, must be supplemented or associated with deep X-Ray therapy or radium therapy. This association is particularly effective in cancer of the cervix uteri, when the surgically inoperable patient can be made operable by the preliminary application of radium. In many of the borderline cases, the conjoint application of radium by the open, intra-abdominal (parametrial) application of radium, as advocated by Schwartz and Proust, will often accomplish curative results when either surgery or radium alone would fail. (This method was illustrated by lantern slides.) In addition, surgery is helpful in apparently inoperable cases, by combining radium therapy with the ligature of the nutrient arteries of the region (ligation of both internal iliacs in cancer of the cervix; the external carotids in cancer of the tongue), or by extirpating the tributary lymph nodes, as in cancer of the tongue, coincidently, or after the arrest of the disease at the primary seat of the invasion by the action of the radium. Surgery is also valuable, with radium, in relieving suffering, controlling hemorrhage and removing septic, offensive masses, and thereby prolonging life in many inoperable forms of cancer of the genital, rectal and other tracts. When mixed infections complicate the course of the disease, autogenous vaccines are often effective in eliminating

*Address before the Orleans Parish Medical Society, October 13, 1924.

these secondary infections, and chemotherapy may also render good service when properly used.

While fully recognizing that cancer still remains a most disappointing and discouraging disease, from the curative point of view, the practitioner and the public must understand that cancer is not necessarily a hopeless disease and is curable when attacked by appropriate methods in its early stages. The chief object of the popular propaganda against cancer is to indoctrinate the public in the recognition of its earliest manifestations, when the cancerous growth is still limited to its primary seat of invasion and when its true nature is in doubt and merely suspected. It is then that the prospect of cure may be held with the greatest certainty.

While the popular propaganda is chiefly useful in diffusing elementary knowledge of the danger signs among the masses, the scientific workers are everywhere bending their best efforts to the discovery of the nature of the disease and to the means of preventing its development or controlling it after it has once appeared. In France, the results accomplished by the scientific researches conducted in the cancer hospitals are published yearly in the transactions of the "Association Française pour l'Etude du Cancer," which is now ably directed by Professor Pierre Delbet. It is only by the co-operation and collaboration of the whole scientific world, in which France is participating with the greatest earnestness and zeal, that the final deliverance of humanity from this pitiless and growing evil can be hoped for.

The lecture was illustrated by a number of lantern slides in which were shown the methods adopted by the French League against cancer in the form of posters, printed circulars, popular lectures and exhibits, intended to instruct the public on the early signs and most insiduous manifestations of cancer, and by other warnings which will lead the public to seek medical advice and assistance at the earliest moment.

The slides also illustrated the usual types of cancer hospitals or pavillions attached to the universities in the large cities of France, and he did this by exhibiting the Municipal Cancer Hospital of Bordeaux. The buildings, plans, laboratories, wards and methods of treatment by deep X-Ray and radium therapy were also very interestingly passed in review.

INGUINAL HERNIA: ESSENTIAL FEATURES IN SURGICAL TREATMENT*

DR. J. D. RIVES,

NEW ORLEANS.

Any paper on this well-worn subject should be prefaced by an apology or at least a defense of its right to exist. My explanation is a growing discontent with the tremendous over-production of new operations that in a large majority of cases consist of inconsequential modifications of the standard procedures which have no foundation in sound anatomical or mechanical principles. I hope to show that inguinal hernia is a simple thing and that our failures are due to simple causes, well understood but little considered.

Out of the many theories of the cause of hernia, two are fundamental and two others give added light. The peritoneal sac is invariable. Whether or not this sac is preformed or acquired is, from the standpoint of treatment unimportant. Mr. Russel and others have brought forward very convincing evidence that it is always preformed but in last analysis the hypothesis is not susceptible of proof. The second invariable factor is an opening in the transversalis fascia. This well-known factor has been brought forcibly to our attention by Moschcowitz who maintains that the normal openings in this membrane through which blood vessels and hollow viscera enter and leave the abdomen are the cause of all abdominal hernias. This work is, I believe, the first fundamental contribution to the literature of hernia since Bassini's and Halstead's epoch-making papers. But again, the controversy as to cause does not concern us. Many writers have called attention to a general deficiency of the supporting structures of the body resulting in hernia. No one doubts that such a condition exists but it is not common and hernias are not invariable features in these individuals. It plays a minor part and is of interest chiefly because it is usually best not to attempt radical cure in such persons at all. Deficient developments of the conjoined muscle and tendon has been widely acclaimed and may be fairly common though certainly not present in a majority of our cases. Furthermore, we are not convinced that it is not a result rather than a cause in the majority of instances for it has seemed to us that comparatively recent

*Read before the Orleans Parish Medical Society, March 9th, 1925.

hernias seldom show it. However, the great anatomist, Mr. Keith, has supported this hypothesis with a comparative and profound embryological study that excites interest, admiration and despair. I do not believe that the theory is proven but we cannot debate with Mr. Keith. The only defense against him is to ignore him unless you be willing to devote a few years to intensive study of the subject. At any rate, the last two theories do not concern us since, obviously we cannot supply the deficiency in either case.

We have then, two remediable defects—first, a peritoneal sac that can nearly always be completely removed, and second, a hole in the transversalis fascia that can be more or less effectively closed. Aside from these basic procedures it seems worth while to build a buttress behind the repaired defect to lessen strain. I fail to see that anything more than that can be accomplished except by way of preventing the minor casualties such as hydrocele and oedema of the testis. If infection does not spoil our work the results will depend directly on the effectiveness of our technique in carrying out these steps.

How then shall we proceed to cure an inguinal hernia? Infection has long been recognized as a most common cause of failure. Therefore asepsis is a prime consideration. We may disregard the surgeon's hands and the instruments or suture materials as causes of infection. Any reasonably good hospital technique together with our own care in preparation will avoid gross contamination in this manner. The conventional methods of skin preparation destroy most surface bacteria and leave a thin protective layer of impregnated epidermis over the myriads of organisms remaining in the hair follicles, sweat and sebaceous glands. If the surface is kept dry; if it is not rubbed by the surgeon's hands, if sweating does not pour bacteria onto the surface, gross contamination will not occur. If gross contamination is avoided, infection will not take place unless devitalized tissue and blood clot remain in the wound, for small numbers of the comparatively avirulent bacteria found in the skin cannot overcome the resistance of healthy tissues. Therefore, we believe that the skin should be screened by dry towels and not many of them; that all dissection should be done with a sharp knife or scissors if possible; that all bleeding points should be clamped before the tissue is infiltrated with blood; and that as little tissue should be caught in forceps and ligatures as is possible.

The incision may be made to suit individual taste so long as it gives adequate exposure. The external oblique aponeurosis may be divided by any sharp instrument so long as the ilio-hypogastric and ilio-inguinal nerves are spared. We find this most easily accomplished by passing a grooved director through a nick at the level of the internal ring down to the external ring and cutting down the groove with a knife. After this structure is dissected back to expose the conjoined tendon above and shelving edge of Poupart's ligament below, the cremasteric muscle and fascia should be lifted up and opened between forceps. The cord is thus exposed throughout the length of the wound and may be easily picked up with the fingers and freed from its bed. It now has no opaque covering and provided blood is not permitted to diffuse itself into the areolar tissue the sac can be readily identified and dissected free from the cord. During this step the vas deferens must be kept constantly in view and if sharp dissection is to be used the tissues must be held steadily tenes by an assistant.

Since Champonniere first advocated high ligation of the sac it has seen a varied career. It has been twisted and transplanted laterally; it has been transfixed, ligated and left in the canal; it has been ligated and excised; it has been ligated, excised and the stump transplanted under the conjoined muscles; and lastly it has been split into strips and plaited like a watch fob. In spite of this man-handling, Champonniere's principle has stood fast as the most important step in hernioplasty. Ninety per cent cures or better have been attained by all methods that secure high obliteration of the sac regardless of other divergences in method. No method has shown better results than transfixion, ligation and excision. Certainly no other is so simple. If the ligation is sufficiently high the elasticity of the peritoneum promptly obliterates the dimple and the free movement of the peritoneum under the transversalis fascia provides a shifting target that makes its reformation difficult. We believe that transplantation of the stump under the conjoined muscle invites recurrence by preventing obliteration of the dimple which guides the abdominal viscera to the weakened area and forms of them a wedge to dilate the enlarged opening in the transversalis fascia (the internal abdominal ring). Sliding hernias cannot be handled in this way but will not be

considered here. Direct hernias cannot be so simply managed. The sac is usually tent-like and may have bladder in its wall. As much as possible should be excised and the opening closed by suture. The fat of the space of Retzius usually heralds the presence of the bladder, but even with the utmost precautions, bladders will no doubt continue to be opened from time to time. There is no effective way of dealing with these sacs and it is significant that most operators report from fifteen to twenty per cent recurrences.

The first essential factor is universally dealt with effectively. The second, the opening in the transversalis fascia is ignored by most surgeons and but half-heartedly attacked by a large proportion of the remainder. Even Moschowitz has made no serious effort to close the opening. Yet it seems obvious that it should be done. This fascia forms a complete envelope for the abdominal cavity though answering to many names derived from various areas covered. It is a thin but very strong, inelastic, dense membrane except where it is required to bear no strain as on the diaphragm. It is the only structure in the abdominal wall that will not relax under pressure, with the exception of the rectus sheath. Hernias never occur through either of these membranes except at normal or traumatic openings. We must admit room for doubt of this statement in the case of direct inguinal hernias since there is no conclusive evidence that a preformed opening is essential at this point. It is none the less true that an opening is always present, not a stretching of the fascia, and that without this opening no hernia ever occurs. Within the last few years this neglected question has been attacked independently by several men. Harrison of Persia splits the stump of the sac and overlaps the flaps to secure closure of the transversalis fascia. This, by his own statement, does not effectively close the peritoneum at the angles and leaves a raw surface inside. In our experience the fascia on the inferior side of the opening is thin and weak so it is doubtful that the closure is very firm. However the method is sound in principle and seems effective. He closes large direct hernias with free fascial grafts, a well established and sound procedure, too seldom employed. Pitzman closes the rent or internal ring by suture of the transversalis fascia and sac to Poupart's ligament. This seems open to the objection that a peritoneal funnel is produced at the weak point and that peritoneum is interposed between the two fascial structures making firm union doubtful. LaRoques suture of the opening from within the abdomen is also open to these objections. More recently, Edmund Andrews recommends suture of the transversalis fascia to Poupart's ligament throughout the length of the inguinal canal. We are accustomed to say that the fascia is not strong enough to suture, but if it is dissected free from the posterior surface of the conjoined muscles a strong glistening white layer will be found that is easily approximated to the ligament in most cases. It seems to us that Andrews has gone to unnecessary lengths but it is the best method so far reported and it is hard to see where it can be improved upon except that it would seem that suture only at the opening is sufficient. It remains to see whether or not results will justify the procedure. We have been attempting closure of the rent by suture for about three years but must confess that until Andrews' article appeared it had not occur to us to dissect the fascia free and in our worst cases we were unable to get a membrane sufficiently strong to be of any value. Since that time we have not failed although two were large recurrent direct hernias. The new floor in these two cases was strong and comforting to the touch.

The hernia is now completely cured. None of its essential features remain. How shall we complete the job? It seems worth while to build a buttress of muscle behind our suture line and since the conjoined muscles are ready to hand we use them after the method of Bassini. This has the additional value of relaxing tension on the transversalis fascia. We prefer to place the cord superficial to this suture line for the reason that it permits suture all the way down to the pubis without the necessity of leaving an opening at the lowermost point where most of the recurrences we see appear. We are aware that Seelig has shown experimentally that muscle will not unite to fascia and that Gallie has perfected a method with autogenous fascial sutures that overcomes this objection. However in the only three recurrent hernias we have seen since the appearance of these contributions, the muscle was still firmly adherent to the ligament and had to be cut away with a knife. In spite of this fact, large hernias had developed and the conjoined muscles were spread out over the sacs as limp and as ineffective as the cremaster. From this we conclude that the muscle is of no value at all unless the sac

is ligated high and the fascial defect repaired. It serves only as a buttress behind the effective repair and if this be the case elaborate and technically difficult method of suturing it are hardly worth while. The same may be said of the many methods of utilizing rectus sheath, overlap of the external oblique aponeurosis, etc. These are much like repairing the roof of a house to keep rats out of the cellar. Hernias occur under them not through them and no amount of overlapping can keep the external oblique tense when a man leans over and shortens the distance between the origin and insertion. If the muscle contracts, tension will be maintained whether there is an overlap or not. If this be undertaken to strengthen a weak aponeurosis there is better ground for the procedure but it is quite exceptional to find a defective structure and even when we do the hernia never comes through it (Coley).

Fancy has ranged free in the plastic repair of the inguinal canal and it is a poor surgeon who has not managed to write his name in the record. The spermatic cord has always been an eyesore to surgeons and, depending on their dispositions they have buried it as deep as possible or put off its disposition until in desperation they had to leave it under the skin. Others of more fanciful turn of mind have found new beds for it above the canal, new points of emergence through the conjoined muscle, etc. Halstead always rational, removed the veins to lessen its bulk and prevent distension of the internal ring. This is objectionable only because it results in more or less atrophy of the testis. It seems to interfere with our closure less in the Bassini operation than in any other and that is the only thing we believe worth while to consider in the case of the cord.

We have not time to consider the various methods of utilizing the rectus muscle. Let it suffice to say that the place to patch a leaking inner tube is not on the casing, though sound, sane surgeons such as Downes and Coley advocate the methods. It is our impression that a fascial graft free or pedunculated, applied directly to the defect should be the method of choice when a satisfactory closure cannot be effected by suture.

We close the external oblique aponeurosis by a simple running suture which is continued downward to close the deep fascia of the upper end of the scrotum thus preventing angulation of the cord at this point. With this technique in use there has not been a case of oedema of the testis or of hydrocele in the service of Dr. Maes in six years.

I have probably wasted a great many words in saying that an inguinal hernia consists of a rent in the transversalis fascia, congenital or acquired, through which protrudes a peritoneal sac, congenital or acquired, containing in its wall or its lumen or both one or more abdominal viscera; and that the operation for its cure should consist of removal of the sac as completely and as simply as possible, with closure of the rent by suture or patch as simply as possible; and that this should be accomplished by art rather than by brute force.

DISCUSSION

Dr. E. A. Ficklen: Rather than let this interesing paper go by without discussion, I will take up briefly the treatment of hernia from the Employer's Liability standpoint.

Our courts take the attitude that if a chronic condition, existing at the time of employment, is aggravated by trauma, the employee is covered. If syphilis or old age, diabetes or nephritis, prolong the convalescence from an injury, compensation is paid on the same basis. This decision may be stretched to cover hernias of long duration that finally cause disability by marked increase in size, or by strangulation, during employment. It is therefore necessary to treat many hernias that are obviously of long duration, tho there are few workmen who do not trace a rupture to a definite fall or strain.

Flabby musculature is a frequent cause of failure in herniotomies. Infection, and defective closure by operators who have little appreciation of the anatomy of the region, are more or less avoidable. It has been my practice to borrow extensively from the rectus muscle when the conjoined tendon is relaxed or poorly developed, and I believe that this procedure is advisable in many instances.

Sharp dissection of the cord from the sac, with careful hemostasis, and provision against the recurrence of hernia internal to the deep epigastric artery after the ablation of the indirect sac, by the erection of an adequate muscular barrier, will guard against many disappointments.

Although there are definite indications for local anesthesia, my personal feeling is that general anesthesia is better for these cases.

Within the recollection of many of us, hernias were repaired with silver wire and kangaroo tendon sutures, and plaster spicas were applied to immobilize the groin. The tendency has been to depend on clean union rather than powerful suture material, and to use only the simplest means to guard the region of the incision from undue motion.

Dr. J. D. Rivers (concluding): It is impossible to estimate the number of methods that are or have been used in suturing the conjoined muscle and tendon to Pouparts Ligament for no accurate count of the number of men who do or have done surgery is available. No issue of a surgical journal is complete without one, so let us add our own.

We believe that interrupted mattress sutures are best since if one breaks the others still hold.

We insert these by first taking a deep bite in the muscle often including the fascia underneath and then with a needle threaded on each end of the suture we carry these through the shelving edge of Pouparts Ligament from within outward, tying the knots outside the aponeurosis. This method minimizes the chance of injuring the femoral vessels and places the knots outside the canal so that if infection should occur about them, as sometimes happens, it will be a subcutaneous infection only. We have tried to convince ourselves that such sutures including the transversalis fascia will close the defect in this structure but it is manifestly impossible for the foscia to unite with muscle interposed. If the sutures are so introduced as to approximate fascia to fascia they will soon relax due to cutting through the muscle and the fascia will separate before firm union occurs.

Galtie has recently thrown doubt on the ability of undivided fascial structures to unite side to side even when firmly sutured so it behooves us to make a separate accurate suture if we are to expect any results.

LUNG ABSCESS*

ISIDORE COHN, M.D.

Professor of Clinical Surgery, Tulane Medical School

NEW ORLEANS.

Abscess of the lung is a border line disease. A vast literature has accumulated in all of the correlated specialties during the past decade.

The internist has contributed his quota to the literature because of his contact with cases which arise following pneumonia and influenza. The Oto-Laryngologist and Bronchoscopist through the increased number of cases which follow operation upon tonsils and other upper respiratory conditions. Their imagination has been fired in an attempt to prevent abscess of the lung by an effort to determine the relationship of the type of anesthetic to this disease. The value of genius combined with imagination has been translated by Jackson into the Bronchoscopic diagnosis and treatment of these cases. The Roentgenologists have contributed more than their share by improved methods of localization which makes surgical procedure safer.

The Association of Thoracic Surgery has added to our knowledge of this subject during the last few years more than any other group.

It is natural that divergent opinions have arisen on many points regarding this disease. There is one outstanding fact that is the need of co-operation for the purpose of prevention. Not only is it a preventable disease but it is one which completely incapacitates the patient and gives a very great mortality. An effort will be made to correlate in a systematic manner some of the literature which has accumulated.

When confronted with a case of abscess of the lung, one naturally inquires into its etiology, prophylaxis, diagnosis, treatment and complications.

Etiology

The etiological factors are many. Abscess of the lung, like suppuration in other locations is dependent on infection, trauma and interferences with blood supply. Lambert and Miller studied 60 cases. From their observation they concluded that abscess of the lung follows pneumonia or "is secondary to other conditions, such as operations on the upper air passages, aspiration and foreign material, traumatism of the chest or metastases from suppurating foci elsewhere in the body."

"Pneumonia seems to be the most common cause and to it 1/3 of all cases can be attributed." (Meis, 1921.) Tuffier 23% Lenhartz 15%.

Heuer and MacCready studied sixty-two cases of lung abscess.

"Thirty-one followed pneumonia.

Sixteen cases were post-operative, four cases followed tonsillectomy.

Seven cases followed acute abdominal infections, of which four were liver abscesses secondary to acute abdominal infections; one a pelvic peritonitis, and two subphrenic abscess secondary to appendicitis."

Whittemore: "The etiology in the last 100 cases of my own could be definitely established in all but eight and is as follows: In 66 cases there had been an operation on the upper respiratory tract under general anesthesia. Pneumonia was the cause of the abscess in 22 cases."

"The most common sense theory is aspiration of infected material during operation."

"The typical lung abscess usually occurs subsequent to an attack of influenza or pneumonia." (Willy Meyer.)

Lockwood of Toronto in 1923 stated:

"Contrary to textbook dictums, lung abscess is a rare sequel of lobar pneumonia. It is probably more common following bronchopneumonia. Aspiration of foreign bodies accounts for a certain percentage of abscesses. A few follow traumatism. Emboli

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*Read before the Orleans Parish Medical Society, March 9th, 1925.

†Surgical Department, Touro Infirmary.

from a distant focus such as an infected middle ear or a thrombosed sinus, is a definite cause. A few develop from pulmonary embolus."

"Particularly, I would emphasize the incidence of lung abscess following operation

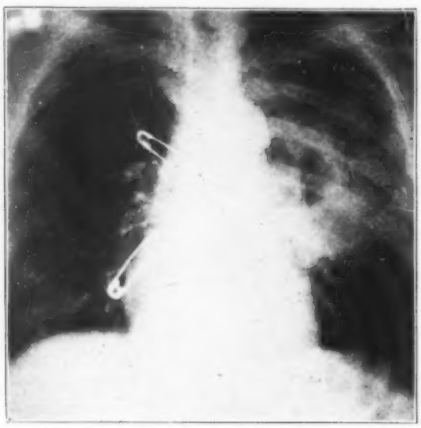


Fig. 1—X-Ray, 50128—Abscess of Left Lung. October 22, 1924

in the region of the nose and throat when a general anesthetic has been employed, it should be pointed out to the profession that lung abscess is not a rare sequel, nor one lightly to be entertained. It should be appreciated that it has occurred almost entirely in patients operated on under general anesthetic."

"Richardson in 1912, first pointed out this phenomenon. Of 208 collected cases of lung abscess following tonsillectomy, we find only seven in which operation was performed under local anesthesia. Twenty-five thousand tonsillectomies have been performed at the Mayo Clinic under local anesthesia, and only one lung abscess has occurred."

"Surely this is irrefutable evidence that the abolition or slowing of the pharyngeal reflex under general anesthesia, by allowing inhalation of infected debris, is the most important factor in the etiology. A fractional percentage of the lung abscesses following tonsillectomy are embolic in origin, but the great majority are due to aspiration of the caseous, bacteria-laden content of the tonsils."

"Admitting and fully realizing, as we must, the danger of tonsillectomy under general anesthesia, and the comparatively rare incidence of this disastrous complication when local anesthesia is employed, in view also of the ease of performing tonsillectomy under local anesthesia with due respect to our associates practicing otolaryngology, the time is overdue for members of this society to go on record as opposed to the employment of general anesthesia for operations about the nose, throat and buccal cavity, and more particularly for tonsillectomy, when the operation can be as readily and so much more safely performed under local anesthesia."

"Otolaryngologists, the profession generally, and if necessary, the laity should be thoroughly aroused to the danger of lung abscess after tonsillectomy under general anesthesia." (Lockwood.)

Dr. Charles W. Richardson, Washington, (1924): "I believe that very few of these cases are of embolic origin, but that, if not entirely they are a large part due to the aspiration of septic material which is squeezed out of the tonsil at time of the operation."

Hayden of Chicago, Herr of Cleveland, express identical views.

Chipman: "When all facts are taken into consideration, we must conclude that lung abscess is caused both by aspiration and by the infective embolus, carried to the lung by the blood stream or lymphatic system."

Dr. E. I. McKesson, Toledo, Ohio: "There can be no doubt that there is an embolic origin of pulmonary complications. That there is the aspiratory cause of complications is also certain."

Fig. 2—X-Ray 50150 Lateral View October 27, 1924. Prior to Operation

In a symposium on abscess of lung at the New York State Medical Society, 1922, participated in by Willy Meyer (Surgeon), Gwathmey (Anesthetist), W. H. Stewart (Radiologist), Marvin F. Jones (Ent.), Gwathmey remarked "whether local or

general anesthesia is employed, the cause is the same, namely aspiration of the blood infected by the cheesy or milky bacteria laden secretions squeezed out of the tonsils at the operation." All agreed on the above.

Clendening tells us that the most frequent preceding cause is tonsillectomy, next comes a foreign body and then a preceding pneumonia."

"The theory that lung abscesses are embolic in origin is comforting but on what scientific basis does the theory rest? So far as I am aware nobody has attempted more than to state his opinion on the matter. To prove the theory is next to impossible." (Borden)

Cutler and Hunt (1920) in a study of post-operative pulmonary complications at Peter Bent Brigham Hospital, found 3.52% such complications. Pneumonia alone contributed 1.86% complications. Whipple 2.6% pneumonia in 3719 anesthesias. Cutler and Hunt believe that the chief factor in the production of Post-operative pulmonary conditions is embolism.

"The anesthetic is not the chief factor. We are strongly of the opinion that the anesthetic is never the primary and sole cause of the ensuing complication."

Cutler and Hunt collected 41,368 cases from Rochester, Massachusetts General Hospital, Montreal, Leipzig and Presbyterian (New York) and Peter Bent Brigham Hospitals. They found four hundred and sixty post-operative pneumonias collected.

They believe that pre-operative infection and trauma are the factors in the production of emboli which produce post-operative pulmonary complications.

Homans (1922) studied 23 cases at Peter Bent Brigham Hospital. He is of the opinion that the aspiration theory of etiology is not proven nor is it a necessary factor. His conclusions are based on the following facts:

"1. The right primary bronchus is larger than the left and is more directly in line with the trachea so that in the natural process of respiration it gives admission to more floating material, bacteria, etc., both in the conscious and unconscious states."

2. "Lung abscesses from all causes have a strong right side and lower lobe preponderance."

3. "In this series of ten abscesses which follow tonsillectomy or tooth extraction seven were in the right lung and three in the left."

"There were 4 in the upper and middle right lobes 3 in the lower right. On the left sides 2 were in the upper and 1 in the lower lobe."

"The distribution of these abscesses is even opposed to the aspiration hypothesis, for if aspiration were a factor abscesses which should be found exclusively in the lower lobes are quite common in the upper. Moreover, Moore has discovered no inconsiderable number of abscesses follow throat operations under local anesthesia, *where* aspiration may as a general rule be disregarded."

From Dr. Jackson's clinic we find such statements as "suppurative disease of the lung frequently results from the aspiration of infected material, hematogenous or lymphogenous infections." (Lukens).

George Heuer summarizes the situation thus:

"Lung abscess follows tonsillectomy and the operation is responsible for the disease."

"The vast proportion of lung abscess follows tonsillectomy done under general anesthetic." "Lung absecess does follow tonsillectomy done under local anesthesia but the proportion is small." Lung abscess due to pneumonia is greatest single factor in his series.

"Viewed from the standpoint of etiology lung abscess is a complication, the elimination of which is largely a problem of preventive medicine and surgery."

With these facts before us summarized:

1. Abscess of lung is largely a preventible disease.

2. It follows pneumonia, influenza and other respiratory diseases.

3. Post-operative lung abscesses follow upper respiratory operations more than abdominal operations.

Prophylactic measures to avoid aspiration or septic emboli must be utilized.

In order to do this intelligently one must consider the anesthetic, since general anesthesia has been so heartily condemned by some.

Comparison of Lockwood's condemnation of general anesthesia with Chipman's statement is worthy of more than passing comment.

Danger of Local Anesthesia

Chipman: "Local anesthesia per se, especially when cocain is used, is more likely than nitrous oxide-oxygen or ether anesthesia to cause the sudden death of patient during the operation. The committee on the advantages and disadvantages of the various local anesthetics, composed of Mayer, Skillern and Sonnenschein, report twenty immediate deaths from local anesthesia,

two from nose operations, and eighteen from throat operations.

French reports that a girl 12 years, met death in forty seconds from a hypodermic injection of 12 drops of a 4 per cent solution of cocain.

Fig. 3—X-Ray 50214—Abscess of Left Lung prior to operation Oct. 27, 1924

Gibson reports a case of poisioning accurring after two applications of a 2 per cent solution of cocain to the throat and tonsils.

With these facts undisputed, many still assert that local anesthesia is safer than ether or nitrous oxide-oxygen anesthesia. The literature nowhere contains any such number of sudden deaths from ether or nitrous-oxygen anesthesia, during nose and throat operations. A live patient with lung complications following ether anesthesia is better than a dead patient following cocain anesthesia."

Borden: "Local anesthesia in preference to general cannot solve the problem, as it is not practicable in young children who furnish the largest percentage of tonsillectomies."

"A further objection is the inherent danger from the toxic effect of the agent."

That general anesthesia can be made safe is evidenced by the following:

"Crowe (since 1911) reports 3,000 tonsillectomies under general anesthesia without a single abscess of the lung."

Mayo Clinic 16,275 cases during 1909-1919, 10 years without a single known abscess of the lung." (Quotation from Heuer).

Heuer: "These facts demonstrate that tonsillectomy under general anesthesia can be made as safe as by any method. The root of the matter is that it is the *surgeon* and his method which is very largely responsible for lung abscesses."

Sluder (quoted by Graham and Singer) report 20,000 tonsilectomies under general anesthesia (nitrous oxide) without a single lung abscess.

Dr. Isabella Herb reports 12,045 operation on tonsils at Presbyterian Hospital under general anesthesia. Lung abscess developed in two cases.

Dr. C. W. Richardson (1921) "In the last two years I have done more tonsillectomies under general anesthesia than ever before and have not had one lung abscess following these operations."

The impression obtained from review of these statements and from observation of the methods of operating on tonsils here and elsewhere permit I believe the deduction that the reason few cases of post-operative lung abscess are seen here is that the great part of this work is done by specialists in this field. Careful hemostasis is practiced, and every possible effort is made to avoid aspiration by the use of suction. After all it is not anesthetic but the anesthetist; it is not tonsillectomy but the lack of prophylactic measures.

The possibility of the occurrence of this serious complication should be deterrent to any but the specially qualified throat surgeon from attempting a simple tonsillectomy.

Diagnosis

According to Clendening "Abscess of the lung is not difficult to recognize provided certain factors are taken into account."

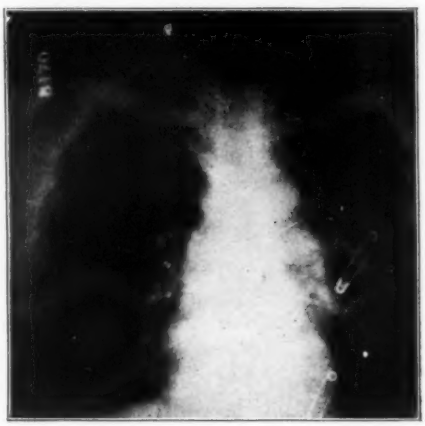


Fig. 4—X-Ray 51702—Three months after operation Jan. 18, 1925

These factors, as stated by him are:

"1. Recognition of a preceding possible cause.

2. Predominence of symptoms over signs.

3. Use of X-ray.
4. Use of the Bronchoscope.
5. Sputum examination.
6. Exploratory puncture."

The above formula while true reminds one of the statement of Dr. William J. Mayo, that "it is easier to make a diagnosis from a text than at a bedside.

Because of the relative infrequency of the disease it may be well to recount the classic picture as given by Lockwood.

"When cough, dyspnoea, pain in chest and the raising of foul sputum are added to the disease, or are prolonged after the period that the ordinary affection of the lung or respiratory tract usually persists, abscess should be suspected. Following tonsillectomy, and other operations about the nose and throat, a foul expectoration is usually produced between the tenth and fifteenth days.

Regardless of the cause, loss of appetite, progressive loss of weight, emaciation, general weakness, pallor, productive cough, foul sputum, pain in the chest, fluctuating temperature and leukocytosis characterize the disease. Rigors occur at some stage. Fifty per cent of patients have blood in the sputum at some time during the course of the disease.

It is a disease of symptoms rather than physical signs. The diagnosis depends on the history, the roentgen-ray findings, examination of the sputum and the general physical examination. On an accurate history only the majority of lung abscesses can be diagnosed.

Needling of a pulmonary abscess as a diagnostic method is mentioned only to be condemned."

Almost all authorities agree with the statement of Lewald that "if correctly interpreted the roentgenographic examination is the most reliable means at our disposal in differentiating pathologic conditions of the lung." The lateral projection method as described by Lewald is a great developmental step in diagnosis — the change in the axis of the fluid level greatly simplifies interpretation.

Treatment

When the diagnosis has been reasonably established the method of treatment to be adopted must be determined.

Treatment may be considered under the following subdivisions:

1. Expectant treatment.
2. Artifical pneumothorax.
3. Bronchoscopic.
4. Surgical.

A review of the opinions of those who have treated large series of cases should be instructive.

Lockwood (1925). "Postural drainage, rest in the open air, forced feeding, artificial pneumothorax and bronchoscopy will effect a cure in most patients. Operative procedure should not be delayed. When the patient is no longer improving or holding his own under palliative treatment, operation should be done."

Lambert and Miller (1924). "Originally, we approached the problem as primarily a surgical one. The results were most disheartening. About one year ago we changed radically our procedure by treating these as primarily medical cases, advocating operation only after medical treatment has failed."

Whittemore (1924). "As long as there is a steady gradual improvement, the expectant treatment may be continued, but, if at any time this ceases, or the condition of the patient becomes worse, surgery should be strongly considered. In delaying operation too long it should be remembered there is always the danger of brain abscess, meningitis, septicemia, extension of the process in the lung and fatal hemorrhage.

The results of expectant treatment alone are not encouraging. In 86 cases of my own 11 recovered with this treatment (10 per cent)."

"In Lord's 100 cases seven spontaneously recovered (7 per cent). Lockwood reported 16 recoveries out of 27 cases (51 per cent). Wessler states that in 33 per cent of all cases of acute pulmonary suppuration following tonsillectomy the patients recover spontaneously within two months. Statistics collected by Lenhartz from three municipal hospitals in Berlin, 1905, showed that there was a mortality of from 60 to 100 per cent following expectant treatment.

Lockwood (1924): "The mortality rate in recorded cases has averaged 58 per cent after medical treatment and 25 per cent in those treated surgically.

Result of Expectant Treatment

Surgeon	No. Cases	
Whittemore	81	10% recovered
Lord	100	7% recovered
Wessler		33% recovered
Lenhartz.....	Mortality 60 to 100% following expectant treatment.	

(Abscesses following tonsillectomy in two months)

Result of Surgical Treatment

Surgeon		No. of Cases	Mortality	Cured
Tuffier	1897	23	26%	74
Murphy	1898	96	39%	61
Garre	1912	182	18.6%	..
Hedbloom	1910	54	23%	..
Lockwood	1922	27	41%	..
Whittemore	1923	52	15%	..
Graham and Singer		13	46%	..
Lockwood collected		1,117	34.6%	..
Heuer		62	28.8%	..
Lambert		..	33.3%	..

Pneumothorax

Pneumothorax is suitable for some cases. Tewksbury reported several cures and Rich has more recently reported eight recoveries out of 10 cases treated.

Lemann and Maes (1914) reported before this society improvement of cases treated by pneumothorax.

Whittemore. "Artificial pneumothorax may be used in conjunction with postural drainage in early cases in which the lung and costal pleura are not firmly adherent. In the cases in which there are strong adhesions I have never seen any evidence pointing toward a permanent cure. The literature for the last 19 years shows an absence of any considerable number of successfully treated cases. The danger of air embolus should be remembered and also, when there are adhesions present the artificial pneumothorax may, in tearing or stretching these, open an abscess that is situated in the periphery of the lung and cause an empyema."

Lockwood: "Artificial pneumothorax should be tried for the small encapsulated abscess not connected with a bronchus, and perhaps for the ordinary longstanding, well localized abscess."

Singer and Graham (1923) "Pneumothorax is done mostly for diagnostic purposes, but in two cases recovery followed."

Bronchoscopic lavage in the hands of the expert has given good results particularly in the class of cases due to foreign bodies and where there is an opening into a large bronchus.

Lambert and Miller: "We are impressed with the fact that this procedure is a very trying ordeal for acutely ill patients, and we are not convinced that it is unattended by a real risk to the patient."

From the Clinic of Dr. Chevalier Jackson reports are made of succsesful treatment by bronchoscopic drainage and irrigation.

Surgical Treatment

The indications for surgical intervention are summarized by Lockwood.

1. "Operation should be undertaken for all patients, who after a thorough trial of medical treatment are no longer improving or holding their own.

2. Early operation is advisable in all cases of fair sized patent cavities surrounded by markedly fibrosed or calcareous walls.

3. If pneumothorax fails to effect a cure in the small encapsulated abscess not connected with a bronchus, operation should be undertaken early.

4. After thorough medical treatment to put the patient in the best possible condition for operation, surgery should be resorted to in all patients in whom an abscess surrounds a foreign body embedded in the parenchyma, or in whom a foreign body lodged in a bronchus cannot be removed through a bronchoscope.

5. Operation is advisable in patients with a very large cavity producing large amount of fluid, in whom the danger of drowning themselves in their own sputum is to be feared."

After deciding upon operation the question of the anesthetic to be used, the mode of approach, simple drainage in one or two stages is a matter of great moment.

Whittemore. "All cases in which the lung and costal pleura are adherent can and should be operated upon under local anesthesia."

"If the lung and costal pleura are not adherent they should be made so before opening the abscess. The correct approach to the abscess having been determined as accurately as possible by means of X-ray and physicial examination, under local anesthesia, a window in the chest wall is opened down to the pleura. Sections of one or two ribs should be removed, and the pleura should be carefully inspected. If the lung and pleura are adherent and this exposed region is near the abscess, the pleura will look and feel thickened. It will have a grayish white color, feel firm rather than soft as a normal pleura feels, and the lung will not be seen moving with respiration. If this condition is found the lung may be immediately opened and the abscess cavity found and drained. On the other hand if the lung and pleura are not adherent, the lung will appear and feel normal. Suture or pack should then be done as liver abscess cases and incision of abscess delayed for 24 to 48 hours."

In Lambert and Miller's work we find the following relative to operative procedure.

"The surgical treatment consisted in the

main of incision and drainage in one stage if the pleural cavity was walled off by adhesions. Otherwise, there were two stages. Local anesthesia is certainly safer than general anesthesia even with nitrous oxide gas and oxygen. A soft rubber dam is the best form of drain, and we have abandoned the use of gauze, employing it only to control hemorrhage."

Heuer and MacCready treated 48 cases of lung abscess, of these 36 drainage in one or two stages was the method of treatment.

Anesthesia

The anesthetic problem in these cases is necessarily a serious one. Local anesthesia is favored by many authorities.

Lockwood, Toronto. "I feel that local anesthesia has a widespread application in thoracic surgery. I do not see why we should take any risk with general anesthesia if the vital capacity of the lung is already lowered."

Whittemore advocates paravertebral anesthesia.

Dr. Willy Meyer cautions against paravertebral anesthesia as follows: "Two deaths have been reported from abroad, and I believe I have lost one case of extrapleural thoracoplasty in consequence of it."

I think that we will do well to follow the advice of these pioneer workers and use local anesthesia in this type of case.

Bronchial Fistula.

There is one sequel of surgical drainage to which I would like to direct your attention. This troublesome condition is of importance for two reasons. First because in the presence of such a fistula irrigation of the cavity is precluded and second closure, while tempting, is dangerous. As long as there is drainage the fistula acts as a safety valve.

Evarts Graham discussing this subject states: "Bronchial fistulae should not be closed artificially during an acute suppurative process. They frequently act as safety valves for suppuration within the lung; and when their need has ceased they nearly always close spontaneously. Several months should be allowed to elapse before artificial closure of them is attempted."

Col. Keller tells us: "Early in our observations of pleurobronchial fistulae it became apparent that any attempt at closure of these fistulae in a septic field was useless and dangerous. Even in the hands of capable surgeons, closure has been followed by such disastrous complications as lung and brain abscesses. In this connection, it might be well to mention, and it is probably fortunate too, that there is no absolutely reliable way by which every bronchial fistula can be closed. While the recognized method of purse string suture with inversion will close some, it has been found in our experience that it is far more satisfactory to reduce the size of the bronchial fistula by surgical means such as partial suture and to allow it to close by granulation after stimulation with local application of two per cent alcoholic solution of gentian violet."

Carl Eggers also warns against premature closure of these fistulae. "As long as the fistula acts as a safety valve for intrapulmonary suppuration it must not be interferred with."

Summary

1. Abscess of the lung frequently follows pneumonia, influenza and operations on the upper respiratory tract.
2. There are two theories of origin-aspiration and embolic.
3. Prophylactic measures should be adopted to avoid as far as possible each type.
4. General anesthesia can be made safe for tonsillectomy.
5. Local anesthesia is not without its dangers.
6. Diagnosis is dependent on careful interpretation of the history, physical examination and X-ray pictures.
7. Lateral projection is of great value.
8. Expectant treatment during the early stages, prior to the formation of adhesions is safe.
9. The results of expectant treatment alone are disappointing.
10. Surgery gives the best results.
11. Local anesthesia is favored for these cases.
12. Bronchial fistulae are common. They should not be closed too soon.

Case History

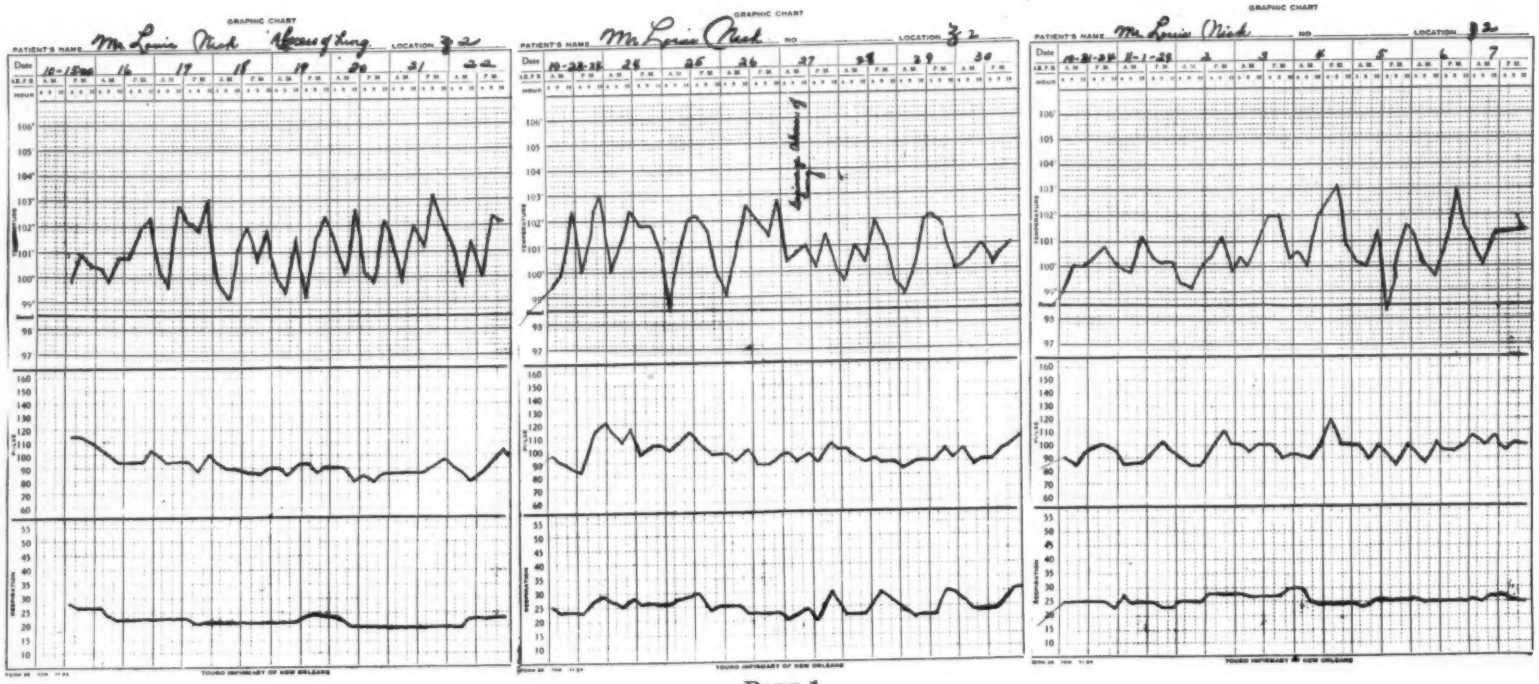
L. N., Age 42, white male presented himself for examination Oct. 16, 1924. The following history was obtained:

For the past three weeks he has had a cold, pain in chest and back, headache, dizziness, dyspnoea at night, restlessness and marked weakness. The cough was almost constant.

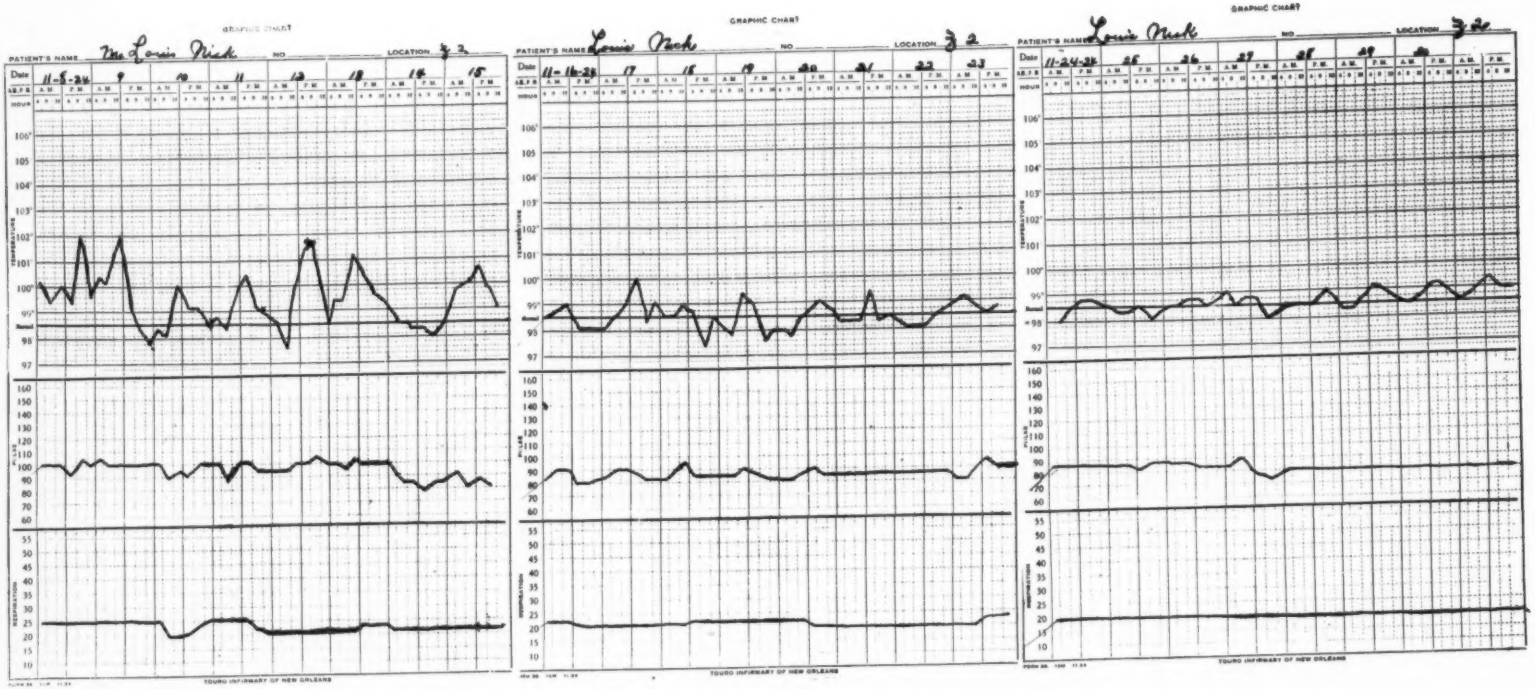
Physical examination was negative except for dulness in the right scapula region, and coarse rales at the base of both lungs. On admission to Touro his temperature was 100, pulse 110 and respiration about 30.

Blood Count October 16, 1924.

Total whites 13,000, small lymphocytes 23, large lymphocytes 3, Neutrophiles 74. No plasmodia found. No abnormal cells.


GRAPHIC CHART
PATIENT'S NAME Mr Louis Nick Abscess of lung LOCATION 32
Date 10-15-25 16 17 18 19 20 21 22
TEMPERATURE
PULSE
RESPIRATION
TOURO INFIRMARY OF NEW ORLEANS
GRAPHIC CHART
PATIENT'S NAME Mr Louis Nick NO LOCATION 32
Date 10-23-25 24 25 26 27 28 29 30
Surgical dressing
TEMPERATURE
PULSE
RESPIRATION
TOURO INFIRMARY OF NEW ORLEANS
GRAPHIC CHART
PATIENT'S NAME Mr Louis Nick NO LOCATION 32
Date 10-31-25 11-1-25 2 3 4 5 6 7
TEMPERATURE
PULSE
RESPIRATION
TOURO INFIRMARY OF NEW ORLEANS

PART 1.



PART 2.

Graphic Chart. Abscess of Left Lung

Examination of sputum, Oct. 16, 1924.
No acid fast bacilli found.
Urine examination, Oct. 16, 1924.
Specific gravity 1018, Reaction Alkaline, Albumin none. Many bacteria and debris.

Believing the case to be acute bronchitis, Dr. Lyons, was asked to take charge of the case. He corroborated our findings.

The temperature continued to vary between 99 and 103.

October 20, a Widal reaction was negative.

Blood count, Oct. 22. Total whites 14,250, Neutrophiles 77, Small lymphocytes 19, Large lymphocytes 4.

Specimen of Sputum. No acid fast bacilli found. Many diploccocci. Many short rods, a few streptococci. Blood culture, October 22, negative.

Progress notes.

Dulness in left lung posteriorly near angle of scapula. Broncho-vesicular breathing.

Diagnosis: Bronchopneumonia or lung abscess? (Dr. Lyons).

X-Ray report. Oct. 22, 1924.

"Examination of the chest shows evidence of a large abscess extending from the 5th to the 8th rib, with evidence of a small amount of fluid within the cavity, and air above. There is considerable infiltration surrounding this cavity in the lung tissue.

Progress notes: Oct. 23, 1924.

Dulness posteriorly from about 4th to 8th rib and forward as far as vertebral border of scapula. Mucus rales everywhere in chest.

10-24-24. Area dulness noted on left from 4th to 8th dorsal vertebrae. Area is slightly to the left of median line and extends laterally to posterior axillary line. Over this region there is broncho-vesicular breathing and occasional subcrepitant rales. Opposite lung shows slightly exaggerated breathing with a few sibilant and sonorous rales. No dulness found in anterior chest or axillary region. Sputum has a disagreeable odor.

10-26-24. Area of dulness has increased, it now extends forward to the post axillary line down as far as the 9th rib. The odor of the sputum is very foul.

X-ray. October 23, 1924.

Examination of the chest shows the abscess in the left lung as previously reported. The localization by the lateral position locates the abscess near the anterior chest wall from about the fifth to the eighth rib.

Operative Record. Oct. 27, 1924.

Pre-Operative Diagnosis: Abscess of Lung.

Surgeon: Isidore Cohn. Local anesthesia.

Intercostal incision about 3 inches long, its middle about the posterior axillary line over the region of the 7th and 8th ribs. Incision carried through the muscle down to the rib. Subperiosteal resection of the 7th and 8th ribs was then proceeded with. Finding the pleura adherent to the lung an incision, was made through the pleura and lung, about ½ an inch long, a pair of Mayo scissors was used to enlarge the original incision into the cavity. A large quantity of chocolate colored foul smelling material was discharged. The cavity which was multilocular was probably about 3 inches in diameter. Two large soft rubber drains (Penrose) were introduced into the depths. (At Dr. Lyons' suggestion, a needle was introduced prior to making the incision in the lung.)

Laboratory Reports on Pus obtained:

"Smear shows organisms morphologically staphylococci and various other organisms. Culture shows only staphylococuc hemolyticus. Negative for acid fast organisms.'

Progress Record: October 27, 1924:

Patient returned from operating room in very good condition and not apparently shocked. Coughing a great deal. Not complaining of much pain. Pulse rapid but good volume. Temperature not as high as previously.

Oct. 28, 1924. Temperature not over 101. Pulse continues good. Still coughing quite a bit. Wound is draining well. Discharge is very foul. Outside dressings were changed and gauze saturated in Compound tincture of Benzoin applied.

10-29-24. Penrose tubes removed. The lung in the depths presented a greenish black color suggesting dead tissue, possible gangrene. The abscess discharged a large quantity of foul smelling pus. Resonance is present now where dullness previously existed. Pulse volume much better. Temperature average is lower.

10-30-24. The extremely foul odor that characterized the abscess before is no longer present.

X-Ray report. 10-30-24. "Examination of the chest shows the abscess cavity in much better condition than previously reported. The infiltration at the lower portion is still present but the lung looks considerably improved above and below the abscess. (Samuel & Bowie).

Progress Notes: Oct. 31, 1924. Dressing changed, small clot found in cavity after removal of mercurochrome pack. The pack has comparatively little odor. Three strips of gauze saturated in balsam and oil packed into cavity.

November 2, 1924. Odor foul as the pack was removed. Some active bleeding occurred. Patient coughed a great deal and the bloody discharge continued until replaced.

November 3, 1924. Pack removed and considerable hemorrhage occurred. The patient coughed and expectorated blood. Bleeding controlled by repacking.

November 7, 1924. X-Ray examination of the chest shows evidence of a resection of the seventh and eighth ribs of the left side, with a marked infiltration throughout the lung on this side. There is some evidence of breaking down of the lung. There is an infiltration on the right side. (Samuel & Bowie).

November 8, 1924. Considerable bleeding occurred when patient began to cough violently during the application of the packs.

November 10, 1924. Some coughing during dressing. Odor is as bad as ever.

November 16, 1924. Examination of right lung shows no dulness, rales nor abnormal respiratory sounds.

November 19, 1924. Cavity smaller, granulating. One large fistula and one very small one. There is less coughing and the coughing is not of the explosive type.

November 21, 1924. Cavity smaller. The base seems to be granulating. The openings into the bronchi seem to be smaller. There is less coughing during dressing.

November 23, 1924. Wound granulating and cavity is smaller. Temperature has been normal for the past 36 hours.

Patient while sitting up in chair had a weak spell. His pulse was good, he became dizzy and pale, saying he felt like he was dying. Cold sweat was present over the entire body. Coughing quite a good deal. Expectorated some bloody sputum.

November 29, 1924. The cavity is very much smaller and there is less odor.

December 1, 1924. Wound smaller. No apparent discharge, even when patient coughs.

December 4, 1924. X-Ray report. "Examination of the chest shows evidence of practically complete healing of the abscess on the left. There is still some pleural thickening in this region but the chest is otherwise in good condition. (Samuel & Bowie).

December 5, 1924. Cavity smaller. No odor.

December 27, 1924. Blood pressure 106/60. Pulse 80.

X-Ray report. Jan. 4, 1925. "Examination of the chest shows an enlarged aorta. The lung expands normally on the left side and there is no evidence at this time of an abscess. There is a slight amount of fibrosis around the old abscess." (Samuel & Bowie).

X-Ray report, January 18, 1925. "Examination of the chest shows no evidence of active abscess of the lung at this time. There is a slight fibrosis on the left, but no other evidence of pathology." (Samuel & Bowie).

January 22, 1925. Patient discharged, feeling fine. Bronchial fistula allowed to remain patent. Wound healing. No rales heard in chest. Voice sounds and respiratory sounds normal.

February 18, 1925. A 2% alcoholic solution of gentian violet was applied over the fistulous tract. There is still slight evidence of the fistulous communication between the lung and the outside.

February 23, 1925. Voice sounds are all clear, and no rales heard at any point. No evidence of an inrush of air can be heard on inspiration at the small fistulous opening. Second application of gentian violet was made.

March 5, 1925. Fistulous opening almost closed. There is a small granulating area on the skin. Gentian violet applied. Patient gaining in weight, and all physical signs of an apparently normal lung are found.

April 1. Fistula closed.

I wish to thank Miss Marshall, librarian of the Orleans Parish Medical Society, for preparing the bibliography.

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To the house staff of Touro Infirmary and the nursing staff, I wish to extend thanks.

BIBLIOGRAPHY.

LUNG ABSCESS.

Baird—Surgical treatment of lung abscess. Ill. Med. Jour. 44:370-73. 1923.

Balboni & Churchill—Report of acute lung abscess in a child cured by artificial pneumothorax. Bost. Med. & Surg. Jour. 190: 965-68. 1924.

Barnes—Report of 12 cases of post-operative abscess of lung and 2 cases of post-operative pneumonia. Rhode Island Med. Jour. 6:35-38. 1923.

Bigelo—Lung abscess following tonsillectomy. Rhode Island Med. Jour. 6:1-6. 1923.

Black—Lung abscess following tonsillectomy. Jour. S. Carolina Med. Ass'n. 16: 27. 1921.

Bordon—Pulmonary complications following nose and throat operations. Laryngoscope, 31:851. 1921.

Botsford—Post-tonsillectomy pulmonary abscess. Cal. State Jour. Med. 21: 19-21. 1923.

Bowen—Lung abscess. Jour. Iowa Med. Soc. 13:142-45. 1923.

Brown—Relations of infections of upper respiratory tract to non-tuberculous infections of chest. Colorado Med. 19: 100-03. 1922.

Butler—Hypertrophic pulmonary osteo-arthropathy following lung abscess, further notes on a previously reported case. Jour. A. M. A. 75: 233. 1920.

Buxton—Report of cases. Virginia Med. Mo. 49: 53-61. 1922.

Cassidy—Purpura hemorrhagica complicated by gangrene of glans penis and lung abscess. Canad. Med. Assn. Jour. 12:334-35. 1922.

Chipman—Relation of anesthetic to pulmonary abscess following nose and throat surgery. Jour. A. M. A. 79: 539-43. 1927.

Ciccarelli—Diagnosis of influenzal pulmonary abscess. Policlinico Sez. Prat. 27:1403. 1920.

Clark—Pulmonary abscess following tonsillectomy. Bost. Med. & Surg. Jour. 188:846-49. 1923.

Clendining—Abscess of lung, Laryngoscope. 32:128-39. 1922.

Clendining—Cause of lung abscess after tonsillectomy. Jour. A. M. A., 74:941. 1920..

Clendining—Use of artificial pneumothorax in lung abscess, hematothorax, bronchiectasis and in advance pulmonary tuberculosis. Southwest Jour. of Med. & Surg. 28:17. 1921.

Clyne & Kibler—Pneumothorax treatment of lung abscess. Southwestern med. 6:399-401. 1922.

Craig—Four cases of bronchoscopy (including 2 of lung abscess" Canad. Med. Ass'n. Jour. 13:185-87. 1923.

Cullom—Lung abscess as complication of nose and throat operation. Jour. Tenn. Med. Assn. 16:144-52. 1923.

Eggers—Treatment of bronchial fistula. Annals of Surgery, 72:345-51. 1920.

Elwyn—Case of acute abscess of lung complicated by massive collapse of lung. Bost. Med. & Surg. Jour. 190:1108-11. 1924.

Ferguson—Differentiation and treatment of lung abscess by exploratory pulmonary puncture and bismuth injection. Canad. Med. Assn. Jour. 14:597-603. 1924.

Fetterolf—Case of post-tonsillectomy pulmonary abscess. Laryngoscope 32:517-23. 1922.

Fetterolf & Fox—Reaction of paratonsillar tissues to tonsillectomy; post-tonsillectomy pulmonary abscess. Amer. Jour. Med. Sci. 166:802-25. 1923.

Fisher & Cohen—Lung abscess in adults following tonsillectomy under general anesthesia, with report of cases. Jour. A. M. A. 77: 1919, 1921.

Frank—Chronic non-tuberculous pulmonary suppuration. Colo. Med. 18: 240. 1920.

Friendman—Pulmonary abscess following tonsillectomy. Wis. Med. Jour. 22: 312-14. 1923.

Funk—Lung abscess. U. S. Naval Med. Bull. 17: 658-69. 1922.

Giese—Treatment of lung abscess. South. Med. Jour. 15: 755-62. 1922.

Glowack—Pulmonary abscess, study of 90 cases. Laryngoscope, 33: 153-56.

Graham—Case of lung abscess due to Friedlnender's bacillus. Surg. Clin. N. Amer. 2:1501-14. 1922.

Greenberg—Case of pulmonary abscess. N. Y. Med. Jour. 116:98-101. 1922.

Gwathmey—Avoidance of pulmonary abscess with general anesthesia in nose and throat surgery. N. Y. State Jour. of Med. 22:394-96. 1922.

Hare—Lung abscess following tonsillectomy (clinic at the Jefferson Medical College Hospital). Therap. gaz. 45: 474. 1921.

Harrell—Case of pulmonary abscess of lower right lobe treated by artificial pneumothorax. Virginia Med. Monthly, 49:585-86. 1923.

Hartwell—Lung abscess. Ann. Surg. 72:333. 1920.

Hess—X-Ray findings in empyema and abscess of lung. Canad. Med. Assn. Jour. 12:871-73. 1922.

Heuer & MacCready—Lung abscess. Arch. Surg. 5:337-42. (pt. 20 Jan. 23).

Heyer—Lung abscess. Mnn. Med. 6:279-85. 1923.

Heyward—Abscess of lung with report of 2 cases. Jour. S. Carolina Med. Assn. 20:4-9. 1924.

Holmes—Lung abscess following injury to chest. International clinics, 1:143. 1921.

Homans—Etiology and clinical features of lung abscess. Bost. Med. & Surg. Jour. 188-577-87. 1923.

Imperatori—Some observations on localized pulmonary suppurations treated by endobronchial irrigation. Ann. Otol Rhin. Laryn. 30:665. 1921.

Kingborn & Meyer—Bronchiectactic lung abscess, operation; recovery. Jour. A. M. A. 79: 1989-91. 1922.

Klapper—Convalescent treatment of lung abscess. Med. Jour. & Rec. 120: 12-13. 1924. (Supp.)

Lambert and Miller—Lung abscess. Arch. Surg. 8:446-56. 1924.

Lehmann—Lung abscess. Canad. Med. Assn. Jour. 10:1090. 1920.

LeWeld & Green—Differential diagnosis between tuberculosis and lung abscess, clinical abscess, clinical and roentgenologic study of 12 cases seen in St. Luke's Hospital. Arch. Surg. 6:303-13. 1923.

Lockwood—Lung abscess. Surg. Gyn. & Obst. 35:461-92. 1922.

Lockwood—Lung abscess. Arch. Surg. 6:514-20. 1923.

Lukens, Moore and Funk—Bronchoscopic drainage of pulmonary abscesses and bronchiectasis. Med. Clin. N. Amer. 6: 1015-28. 1923.

Lukens—Pulmonary abscess following tonsillectomy; a cure by bronchoscopic drainage. Surg. Clin. N. Amer. 4:70-76. 1924.

Lyman—Abscess of lung; etiology. South. Med. Jour. 15: 744-48. 1922.

Lyman—Relation of nose and throat operations to lung abscess. Jour. Mo. Med. Ass'n. 20: 418-20. 1923.

Lynah—Bronchoscopic studies of pulmonary abscess. Jour. A. M. A. 77:1548. 1921.

Lynah—Bronchoscopic treatment of bronchiestosis and pulmonary abscess. Med. Record, 97:215. 1920.

Lynah & Stewart—Roentgenographic studies of bronchiectasis and lung abscess after direct injection of bismuth mixture through bronchoscope. Annals of Surg. 73:362. 1921.

Mackenzie—Lung abscess. Med. Jour. & Record, 119:191-94. 1924.

McKinney & Caldwell—Following extraction of teeth, cure by artificial pneumothorax. Canad. Med. Assn. Jour. 10:451. 1921.

Meyer—Bronchiectactic pulmonary abscess simulating apical tuberculosis. Arch. Surg. 8:407-17. 1924.

Meyer—Establishment of a temporary or permanent pulmonary lipfistula in conservative treatment of advanced bronchiectactic lung abscess. N. Y. State Jour. Med. 22:389-92. 1922.

Meyer—Surgical aspects of abscess of lung. Med. Jour. & Record, 119: 189-91. 1924.

Meis—Lung abscess. Jour. Iowa Med. Soc. 11: 81. 1921.

Miller—Pathology and bacteriology of empyema and abscess of lung. Canad. Med. Assn. Jour. 12-721-24. 1922.

Minor—Clinical course and diagnosis of post-operative pulmonary abscess. South. Med. Jour. 15: 749-55. 1922.

Molz—Lung abscess. Ill. Med. Jour. 39:484. 1921.

Moore—Analysis of 202 cases following operative work about upper respiratory passages. Jour. A. M. A. 78: 1279-81. 1922.

Mowbray—Empyema and abscess of lung. Canad. Med. Assn. Jour. 13: 320-23. 1923.

Murphy—Lung abscess following tonsillectomy. Wis. Med. Jour. 20: 139. 1921.

Patterson—Pulmonary abscess due to lodgment of tooth. Penn. Med. Jour. 25:869-71. 1922.

Peabody—Abscess of lung occurring after tonsillectomy with case report. Kentucky Med. Jour. 21: 121-27; 692-96. 1923.

Peters—Lung abscess. Jour A. M. A. 75: 1060. 1920.

Porter—Lung abscess following tonsillectomy under local anesthesia. Virginia Med. Monthly, 47: 606. 1921.

Prenn—Pulmonary abscess following nose and throat surgery. Ann. Otol. Rhin. & Laryn. 32: 413-16. 1923.

Pritchard—Value of rest in cases of empyema and lung abscess. Jour. A. M. A. 79: 2208-10. 1922.

Prosser—Review of 18 cases of pulmonary abscess. Military Surgeon, 51: 37-41. 1922.

Rendleman—Exophthalmic goitre and cholecystitis following tonsillectomy. Jour. Iowa Med. Soc. 10:168. 1920.

Rich—Acute lung abscess treated by therapeutic pneumothorax. Amer. Jour. Med. Soc. 164:428-36. 1922.

Richardson—Abscess of lung and method of prevention in naso-pharyngeal surgery. Ann. Otol. Rhinn. & Laryn, 31: 960-63. 1923.

Sante—Study of lung abscess by serial radiographic examination. Jour. Radiol. 4: 183-88. 1923.

Schwerdtfeger—Physical signs in pulmonary abscess. N. Y. St. Jour. of Med. 22: 397-98. 1922.

Shivers—Lung abscess. Southwest Jour. of Med. & Surg. 28-29. 1921.

Simpson & Noah—Report of 2 cases of lung abscess following tonsillectomy under local anethesia in tubercular subjects. Penn. Med. Jour. 23: 322. 1920.

Singer & Graham—Study of 34 cases of abscess of lung. Jour. A. M. A. 81: 193-94. 1923.

Sisson—Pulmonary abscess following aspiration of a tooth cured by artificial pneumothorax. Med. Jour. & Record. 119: 497-99. 1924.

Stewart—Abscess of lung roentgenographically considered. Ann. Clin. Med. 2: 312-28. 1924.

Stewart—Pulmonary abscess roentgenologically considered. Jour. Radiol. 4:277-78. 1923.

Stewart—Roentgen examination in determination of proper method of treatment of pulmonary abscess. Amer. Jour. Roent. 10: 841-42. 1923.

Stewart—Roentgenological interpretations in pulmonary abscess. N. Y. State Jour. Med. 22: 390-99. 1922.

Todd—Surgery of tonsils with pulmonary abscess as sequal. Jour Okla. Med. Assn. 16: 355-58. 1923.

Voorhees—Lung abscess following tonsillectomy, report of case with bronchoscopic and X-Ray findings. Laryngoscope. 31: 600. 1921.

Walker—Control of lung abscess following tonsillectomy and retropharyngeal abscess suction dissector. Laryngoscope. 30: 701. 1920.

Wessler & Schwartz—Lung abscess in infants and children. Amer. Jour. Dis. of Children. 19: 137. 1920.

White—Lung abscess. Texas State Jour. Med. 18: 398-400. 1922.

Whittemore—Etiology and treatment of non-tuberculous pulmonary abscess. Surg. Gyn. & Obst. 38: 461-65. 1924.

Wittemore—Lung abscess. Surg. clin. N. Amer. 1: 765. 1921.

Wittemore—Lung abscess from a surgical standpoint. Surg. Gyn. & Obst. 31: 144. 1920.

Whittemore—Non-tuberculous pulmonary abscess. Bost. Med. & Surg. Jour. 188: 497-501. 1923.

DISCUSSION

Dr. Homer J. Dupuy: It is with a great deal of pride that I can say that we, of New Orleans, are among the first, if not the first, to have applied the suction apparatus in throat surgery. I can recall that before its use I had three or four cases of pulmonary abscess, but none since. Now the prevention:

(a). As soon as the patient is under the anesthetic open the mouth and with the suction remove this enormous amount of secretion in the throat. As you know, the mouth is a harbor for microbes. Therefore, begin the suction as soon as the patient's mouth can be opened and remove these secretions from the throat.

(b). The operation should be performed as quickly as possible.

(c). Suction should be used properly at the base of the tongue, where it is very easy for bacteria to slide down towards the larynx.

By carrying out to perfection the use of the suction apparatus, using it in the beginning of the operation and all through the operation and securing perfect hemostasis by ligature, etc., we can certainly help to further the prevention of abscess following tonsillectomy.

Dr. E. E. Allgeyer: I would like to disagree with the contention made that anesthesia has nothing to do with lung abscess following throat operations. Producing too deep anesthesia is a predisposing cause of lung abscess. The anesthetist not thoroughly experienced has a tendency to produce profound anesthesia in order to abolish all the throat reflexes, thereby prolonging the time of recovery from minutes to hours during which time there is a great change that aspiration of blood and septic material may occur. If in my patients the reflexes do not return in five minutes after anesthesia is discontinued I do not consider that it was properly administered.

Dr. Arthur I. Weil: Whenever there is a discussion as to the cause of pulmonary abscess, it is generally conceded that in the majority of cases it is the result of tonsillectomy or other operations on the upper air passages. Of course, abscess of the lung comes from many causes, but one of the commonest and, strange to say, one that has only been recognized recently is operation on the upper air passages, especially tonsillectomy, with pulmonary abscess as a sequence. Aspiration may be the cause, or embolism, and from studying the literature it seems to me that there are two distinct types of abscess following tonsillectomy in which the course is entirely different, viz:

(a). Type one in which the patient, after tonsillectomy, never seems to get back to normal, runs temperature, has a constant cough, more or less distress in the chest, never convalescing.

(b). Type two in which the patient recovers

normally from the operation, goes home anywhere from six to twelve days after and, as far as tonsillectomy is concerned, is wholly cured. Suddenly he develops chest symptoms which go from bad to worse, with lung abscess formation.

I believe the first type can readily be attributed to aspiration while the second type is doubtless embolic in character.

Now, we do not see very many pulmonary abscesses in this locality. Mt. Sinai in New York reports nine cases following tonsillectomy within a year—at the Touro, Charity, and Ear, Nose & Throat Hospital here, where a very large number of tonsillectomies are done, we do not get anything like that proportion of pulmonary abscesses following operation. I think the reason for that is clear: here we operate upon our cases carefully. That may sound like a presumptuous statement to those who have not gone around the country and witnessed the apparent lack of care in tonsillectomies. It is considered an operation without danger, an operation which is alluded to carelessly by specialists and others and in which the patients are operated and turned over and allowed to bleed. Seeing this, perhaps you would believe that the careful carrying out of tonsillectomy is the chief safeguard against pulmonary abscess.

With regard to analgesia and the proper use of the suction: In tonsillectomy, as we dissect the tonsils and squeeze them out with the snare there is an amount of caseous matter that is bound to get into the throat and if we are not careful will be aspirated in the lung and become the focus of an abscess. Caution in operating, careful administering of the anesthetic, the strict attention with which suction is carried out, all aid in avoiding lung abscess. We can in some cases also avoid embolism, which is very often due to traumatism of the tissue at opeartion. Where you have a clean cut field of operation and little traumatism you are not apt to get abscess formation from embolism.

As to the treatment, that is a matter for the surgeon to solve. In the course of discussion bronchoscopy has been mentioned as one of the treatments. This has been used by Chevalier Jackson successfully in certain cases. I believe, however that the only type that can be successfully treated by bronchoscopy is pulmonary abscess caused by foreign body. Those abscesses can be reached by that method but it is a question in my mind whether the ordinary lung abscess, especially of the embolic type can be so reached.

Dr. Dan Deal, (Springfield, Illinois). I want to express the opinion, of the men on this trip, that the reputation of the South for hospitality has been fully exemplifield during our visit, and while here we have profited very much. I congratulate Dr. Cohn on his paper; it is certainly an extensive study and resume of the literature. One thing which has not been extensive in the literature and which we have used in five cases in which simpler treatment had been considered and finally decided that radical procedure was indicated—we have done five for bronciectasis, and have had four foreign bodies; by using the surgical procedure of a preliminary pneumothorax, beginning a week before the chest is opened and getting down to atmospheric pressure or a little pus before the operation, then opening the chest widely you do not have the pleural shock, which is a misnomer. In my opinion the so-called pleural shock is simply the sudden pressure change and you do not have it when the simple precedure of a pneumothorax has been gradually produced.

The last reports which I saw showed a mortality of 50 per cent in lobectomies; if this procedure is used the mortality in lobectomy will be reduced to fifteen per cent. The question may arise as to what happens in these cases after the lobe is removed. It is surprising how high the diaphragm will come up and how high the expansion in the opposite lung after this procedure. We decrease the positive pressure following operation, or at least reduce the chance of fluid forming and also control hemorrhage.

Dr. Isidore Cohn (concluding): I do not believe that Dr. Caine would have made the statement regarding anesthesia having nothing to do with lung abscess if I had read the following quotation from McKesson: "There can be no doubt that there is an embolic origin of pulmonary complications. That there is the aspiratory cause of complications is also certain."

Gwathmey believes the same thing. The anesthetic probably has something to do with it and since everybody cannot operate as fast as the man who operates in twenty seconds, most of you had better use your suction pretty well.

ANESTHESIA IN OBSTETRICS*

WALTER E. LEVY, M.D.

NEW ORLEANS.

"Unto the woman He said, I will greatly multiply thy sorrow and thy conception; in sorrow shalt thou bring forth children." Thus spoke the Lord unto Eve after she had eaten of the forbidden fruit. And until comparatively recent years this has been true,—true until the 19th of January, 1847, when Sir James Simpson of Edinburgh first made use of an anesthetic in obstetrics, performing a verion under ether anesthesia.

Even in the day of Homer mention was made of the anesthetic effects of nepenthe, and Herodotus refers to the practice of the Scythians, of inhaling the vapors of a certain hemp to produce anesthesia. The virtues of mandragora are alluded to by Dioscorides and Pliny. In China in the third century, Hoatho produced anesthesia. The Talmud is replete with reference. And thus down through the ages, even up to the time of the immortal Morton, but nary a word is said about successfully, relieving the woman, from the original curse placed upon her in the Garden of Eden. In fact, Simpson, himself, said in his text-book: "I further attempted to ascertain if any writer had proposed to assuage or annul, by the same or other means, the pains attendant

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upon human parturition. I failed, however, in finding any traces whatsoever, either of any practical attempts to abrogate or modify, by true anesthetic means, the pains of labor, or of any theoretical suggestions even as to the very possibility of effecting the desired result." Is not the woman in labor entitled to relief? Most certainly, and every modern obstetrician should keep uppermost in his mind the words of Bacon: "I esteem it the office of the physician, not only to restore health, but to mitigate pain and dolors."

It was toward the end of the year of 1846 that Sir James Young Simpson saw Lister operate under ether anesthesia and he was so impressed with its success that he began to use it in midwifery practice. However, he abandoned ether in favor of chloroform, and in March 1847, he read a paper before the Medico-Chirurgical Society of Edinburgh, advocating its use for the relief of pain in obstetrics. Thus to Sir James Simpson we are everlastingly indebted for opening up that field in obstetrics wherein the parturient woman is eased from the nerve-wracking pains of childbirth.

It is not the purpose of this paper to go cal anesthetic and the technique of its adinto minute details as regards each obstetriministration, but rather to discuss briefly and in a practical way the choice and desirability of those anesthetics with which I have had experience. However, in the particular case of the synergistic analgesia of Gwathmey, I shall deal more specifically, inasmuch as it holds out a greater promise in the field of painless childbirth,—much more as regards safety and practicability, than its much vaunted rival, twilight sleep.

Chloroform and Ether

As mentioned before, both ether and chloroform were introduced into obstetrics by Simpson. Contrary to the practice of Simpson, however, ether today is the more favored of the two.

Chloroform is still used by many obstetricians because of its quick action, its fairly pleasant smell, and the fact that it rarely causes nausea and vomiting. There are several objections to chloroform, namely, —the narrow margin of safety in regard to respiratory paralysis; and the fact that chloroform not seldom leads to a necrosis of the liver, and is thus strongly contraindicated in cases of impending eclampsia or in eclampsia itself.

Ether, on the other hand, while slower in action and often causing more nausea and vomiting, is a far safer anesthetic than chloroform. I am frank to say, that were I short of assistants in conducting an obstetrical case, and without the synergistic mixture of Gwathmey at hand, I would not hesitate to allow some lay person to administer ether by the open drop method under my direction.

Neither chloroform or ether is desirable in the face of respiratory or renal complications. Chloroform, furthermore, is said by Graham to be transmitted through the placenta and is a predisposing cause of hemorrhagic disease in the newborn.

Morphin-Scopolamin

Morphin and scopolamin were recommended in 1899 by Schneiderlin for surgical anesthesia, but their first use in obstetrics was by Steinbuchel in 1902. It remained, however, for Kroenig and Gauss of the Freiburg Clinic, to develop and popularize its use. It was in 1907 that the first one thousand cases were reported from the Freiburg Clinic, and in 1913 Gauss and Kroenig reported three thousand cases in a paper read in Chicago. Since then much has been written both in support of and in condemnation of the method.

It would indeed be presumptuous, were I, with an experience of less than one hundred cases, to place myself in the unenviable roll on condemning such authorities as Kroenig and Gauss. But one has to take into consideration the ideal environment, assistance and methods of procedure at the disposal of these men, who concentrated their years of experience upon this one type of analgesia. In a general hospital where no provision is made to avoid interruption, such as noises, incompetent and untrained assistance, etc., one can readily realize the impossibility of surmounting these obstacles, and thereby approaching the ideal in any way. If such is the case in a hospital, what must be the results to be obtained in a home? This is a conclusion reached, not based upon experience alone, but upon common sense and every-day judgement.

Morphine and scopolamine are of value as first stage drugs, and as such are a valuable adjunct to nitrous-oxide-and oxygen during the second stage of labor. At present this is the only use that I make of these drugs, and then only in selected cases.

Nitrous Oxide

It was in 1880 that Klikowitch of Petrograd recommended nitrous oxide and oxygen for obstetrical purposes, using an 80 per cent mixture of oxygen with nitrous oxide. It remained, however for Webster in 1907, and Webster and Lynch in 1913,

to revive and popularize the use of nitrous oxide in obstetrics, particularly for producing analgesia during the second stage.

Among the many advantages claimed for this type of anesthetic are :—The fact that it is under the absolute control of the anesthetist at all times; the duration of labor is perhaps a bit shortened, and the force, frequency and duration of the labor pains are not affected; the ease and rapidity with which the patient is completely relaxed is of great importance, particularly at the completion of the second stage.

Nitrous oxide as an intermittent analgesic can be given with safety over a period of from six to seven hours, thereby giving relief to the average primipara during the entire second and great portion of the first stages. It is our custom to precede the administration of the gas by a preliminary hypodermic of morphine or heroin.

There are practically no dangers connected with nitrous oxide-oxygen analgesia. In addition we never hesitate to employ nitrous oxide in order to do a versión, a forceps, or even a cesarean section. True, the baby in such a case may be a bit cyanosed, but by merely increasing the amount of oxygen in the mixture before severing the cord, the infant almost immediately assumes a pink color and begins to cry lustily.

Where the expense, and it is not great, is not a particular item, nitrous oxide-oxygen is without a doubt one of the most satisfactory obstetrical anesthetics that we have. In the hands of an expert it is relatively easy of administration and is very safe as regards both mother and child.

Ethylene

Much that I have said in regard to nitrous oxide-oxygen analgesia and anesthesia applies likewise to ethylene, with perhaps these marked differences: Ethylene is highly explosive, particularly when in mixture with oxygen; ethylene has a rather disagreeable odor, and it is this feature which makes it rather unsatisfactory when given intermittently for analgesia; the relaxation with ethylene is much greater than with nitrous oxide, and if one is not particularly careful, labor may easily be prolonged, thus rendering it unadaptable for self-administration as is nitrous-oxide. The amount of post-partal hemorrhage, is in our experience greatly increased. When ethylene was first introduced in New Orleans, Dr. Ernest Allgeyer and I conducted a fair series of cases under this particular gas, and it was this feature which was especially noticed.

With DeLee, we would say that in view of the above, we would hesitate to give it unqualified endorsement and for the present, at least, incline toward nitrous oxide and oxygen.

Synergistic

Recently there has been brought before the medical profession the synergistic analgesia by the method of Gwathmey. This method is so new and gives so much promise of ultimate success, that I shall go more into detail concerning it. In the words of Gwathmey, "the ideal sought was a state of relaxation and analgesia with consciousness but little if at all impaired, so that full co-operation might be had at all times."

Briefly, as used at present, it consists in giving the patient a preliminary hypodermic of 1-6 of a grain of morphia in 2cc. of a fifty per cent chemically pure solution of Epsom salts. This is given intramuscularly, preferably deep into the deltoid. About thirty minutes later, a second hypodermic is given of the Epsom salts alone. It is at this time that the rectal instillation is given. The method we use for this instillation is that of Cowan and is as follows: The patient is placed on her left side. A large catheter is inserted high into the rectum, care being taken to carry the catheter well above the descending part. The mixture is then injected by means of a triumph syringe, very slowly and between pains. It should take some ten minutes to inject the entire amount. Pressure with a folded towel is now made upon the perineum for about ten minutes more. If this technique is carefully followed, the percentage of successes is greatly increased, as the entire mixture is retained, due to the ball-valve-like action of the baby's head. Within about fifteen minutes, the patient shows marked relief from pain, and if left in a darkened and quiet room, a tendency to doze. At this period ether can very easily be smelled on the patient's breath. The analgesia lasts for a period of about five hours. If at any time before this the patient shows a tendency to come out of the anesthetic, 2cc. of fifty per cent Epsom salts is given intramuscularly and it is really remarkable to see her in a few minutes lapse into a state of semi-consciousness.

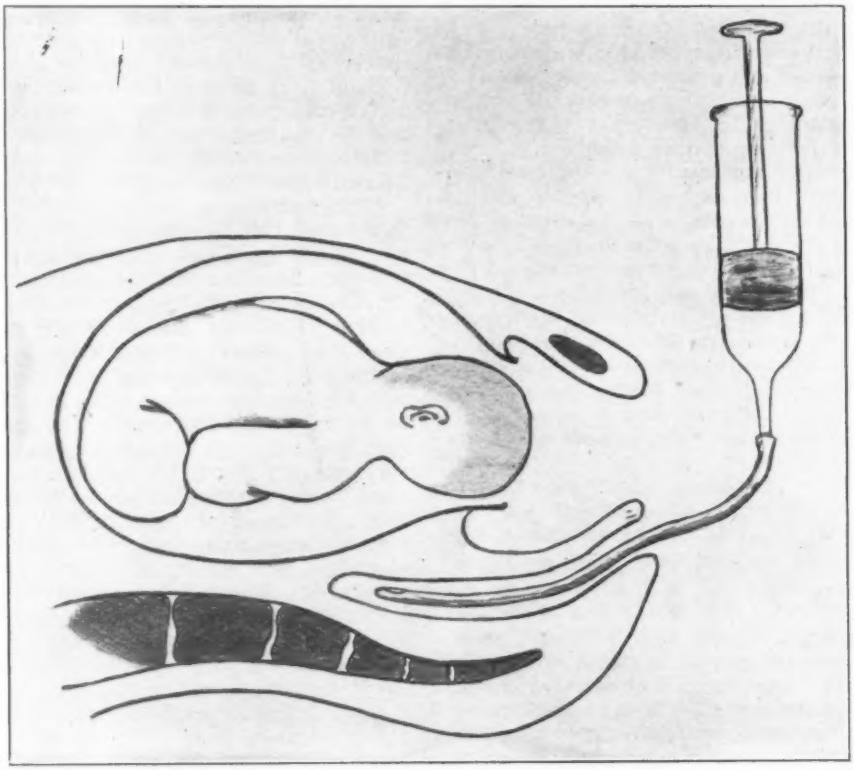
A few practical suggestions concerning the preparation of the patient for synergistic analgesia, gleaned from our observations, are not amiss. In the first place, all preparation, except the final scrubbing and draping, should be completed before the analgesia is started, as each added distur-

bance lessens the likelihood of success. Secondly, the perparatory enema should be ordinary tap water or saline, and not soapsuds or oil and glycerine, as these latter two are irritants and increase peristaltic movements, thereby favoring expulsion of the retention enema. Furthermore, if a purgative has been given a short time before or just after the patient has gone into labor, it is more than likely that the instillation will not be completely retained.

It has been my experience that this method of analgesia retards the progress of labor in fully twenty per cent of the cases. This, in my opinion, is not a vitally serious objection. Lately when this has occurred we have given 2-3 min. of pituitrin as an uterine stimulant, with excellent results. The technique which I shall employ in the future will consist of omitting the quinine and alcohol from the retention enema, and the substitution of this by the hypodemic injection of 2-3 min. of pituitrin when indicated.

Another point of particular interest that we have noted is that the analgesia is not sufficiently lasting in those cases of occiput posterior which are slow to rotate, and if the patient is to have relief during this entire trying period, it is necessary to repeat the procedure completely. This is perfectly safe, according to Gwathmey, if about five hours have elapsed since the first rectal instillation.

Synergistic analgesia, however, is not without some drawbacks. In the first place, the patient should not be left alone after she is under its influence. True, she does not need the expert watching that is so essential for twilight sleep; nevertheless, the patient must be watched that she does not roll out of bed, and also that she does not choke, from her tongue dropping back, if she is too greatly relaxed.



Showing the Cathetic Introduced above the Presenting Part

As to the danger of the anesthetic itself, that is, considering the toxicity of both ether and magnesium sulphate as used in this method, I shall quote from a letter from Gwathmey himself: "Generally speaking, the difference in the anesthetic and minimum lethal dose of ether as determined by Dr. Hooper, experimenting upon albino

rats and using the internal saphenous vein, is represented by the number 2 1-2. The same difference in regard to magnesium sulphate is merely a fraction. By combining a 6 per cent ether water solution with a 6 per cent magnesium sulphate solution, the same difference is expressed by the figure 2, which means that we have a 50 per cent margin of safety when we combine the two drugs. As used at the Lying-In Hospital, the synergism is procured and we have a much wider margin of safety, because we use a much larger proportion of ether than we do of magnesium sulphate."

In an article in the Bulletin of the Lying-In Hospital for November, 1924, Gwathmey sums up his ideas on twilight sleep and synergistic analgesia as follows: "In 'twilight sleep' fetal asphyxia occurs in 9.6 per cent of cases, but fetal mortality is not above the average." (Jellett & Mandill—Manual of Midwifery) In our series the percentage is less than one per cent and this case was not fatal. The usual objections against twilight sleep (a) prolonged labor for hours and days, use of forceps more often necessary, the percentage of ruptured perineums higher, failure of occipito-posterior positions to rotate normally (b) restless delirium and violence, disturbance of heart and lungs, postpartum hemorrhage and uncertain results, do not seem to obtain with the present method.

"As a general proposition "synergistic analgesia" is a safer condition than either oil-ether analgesia or "Twilight Sleep." In Twilight Sleep too much dependence is placed upon morphin and its action is too greatly stressed—hence the high per centage of asphyxia. With the synergistic method, we attempt to secure relaxation with the magnesium sulphate as well as using it for its power of prolonging the effect of the morphin. Ether is a powerful stimulant and analgesic as well as anesthetic. The attempt is made here to use it for only its stimulating and analgesic properties and we believe we obtain this by using it in the minimum dosage as given."

(My experience with synergistic analgesia is based upon forty cases conducted at Touro Infirmary. Much valuable assistance and several valuable suggestions were given by the senior obstetrical resident, Dr. Guy Knolle).

Conclusions

1. The ideal obstetrical anesthetic is not at our command.

2. The anesthetic must be selected to suit the individual case and the particular conditions encountered.

3. In this day of enlightenment and progress, when such advances have been made along the lines of anesthesia in surgery, every pregnant mother has a right to expect and demand a confinement with a minimum amount of pain and discomfort, without endangering her life or that of her offspring.

4. It is the solemn obligation of every physician practicing obstetrics, to familiarize himself with the progress made in anesthesia, and to employ that which in his experience and judgment is best suited to each particular case.

BIBLIOGRAPHY

Abbe—Chloroform versus ether at Columbia Hospital for women. Amer. Jour. of Obst. 57: 547-52. 1908. Also 57: 587-91.

Adams—Morphine and magnesium sulphate as an obstetrical analgesic. Amer. Jour. of Obst. & Gyn. 8: 266-71. 1924.

Appleton—Anesthesia in obstetrics. Bost. Med. & Surg. Jour. 182: 321-26. 1920.

Boyle & Hewer—Recent work in anesthesia for gynecology and obstet. Jour. Obst. & Gyn. Brit. Empire, 31: 264-66. 1924.

Brant—Anesthesia in obstetrics. Bost. Med. & Surg. Jour. 174: 458-62. 1916.

Chase—Nitrous oxide anesthesia and analgesia in obstetrics. Providence Med. Jour. 17: 195-201. 1916.

Copeland—Nitrous oxide-oxygen analgesia and anesthesia in obstetrics. Canad. Med. Assn. Jour. 7:405-11. 1917.

Danfroth—Nitrous oxide—analgesia in obstretrics. Amer. Jour. Obst. 76: 563-71. 1917.

Danforth & Davis—Obstetric analgesia and anesthesia, consideration of nitrous oxid-oxygen and various combined methods. Jour. A. M. A. 81: 1090-96. 1923.

Davis—Anesthesia and analgesia in labor. Surgery, Gynecology and obstetrics. 31: 601. 1920.

Davis—A study of chloroform ether and nitrous-oxid-Oxygen in pregnancy and labor. Amer. Jour. Obst. 76: 557-62. 1917.

Ficklen—Induction of anesthesia and analgesia by oral administration by various drugs with report of cases. N. O. Med. & Surg. Jour. 72: 413. 1920.

Gauss—Die Anwendung des Skopolamin-Morphium-Daemmerschlaf in der Geburtschuelfe. Med. Klin. 2: 136-38. 1906.

Gauss—Bericht ueber das erte Tuasend Geburten im Skopolamin-Dammerschlaf. Muenchen Med. Wchnschr. 54: 157-61. 1907.

Gauss—Die Technik des Skopolamin Morphium Daemmerschlafes in der Geburtshuelfe. Zentralbl. f. Gynaek. 31: 33-38. 1907.

Gwathmey & Greenough—Clinical experience with synergistic analgesia. Annals of surgery. 74: 185-95. 1921.

Gwathmey & Others—Painless childbirth by synergistic methods. Bull Lying-In Hospital of New York. 13: 83-94. 1924.

Gwathmey & Others—Painless childbirth by synergistic methods. Amer. Jour. Obst & Gyn. 6: 456-66. 1923.

Gwathmey & Others—Painless childbirth by synergistic methods. Amer. Jour. of Obst. & Gyn. 8: 154-63. 1924.

Harper—Anesthesia in normal labor. Albany Med. Annals. 31: 647-53. 1910.

Huggins—Indications for dangers in use of spinal anesthesia in obstetrics, gynecology and abdominal surgery. Amer. Jour. Obst. & Gyn. 3: 412-18. 1922.

King—Various anesthesies as applied to obstetrical work. N. O. Med. & Surg. Jour. 64: 655-63. 1911-12.

Oldham—Sacral anesthesia. Kentucky Medical Journal. 21: 321-24. 1923.

Polak & Matthews—Review of anesthesia in obstetrics. Long Island Med. Jour. 11: 131-38. 1917.

Simpson, Sir James Y.—Obstetrics memoirs and contributions. v.2 1880.

Smythe—Synergistic analgesia. Amer. Jour. of Surgery, Anes. Supp. 37:85-89. 1923.

von Steinbuechel—Schmerzverminderung und Narkose in der Geburtshuelfe mit spezieller Berueckschtigung der kombinierten Skopolamin Morphium Anesthesie. 1903.

Tyler—Further experiences with synergistic analgesia. Sou. Med. Jour. 16: 199-202. 1923.

DISCUSSION

Dr. Hilliard E. Miller: I have had about eight months' experience with synergistic anesthesia, this experience covering some thirty-five or forty cases, and I can say that I have had the same gratifying results which Dr. Levy has reported in his paper. He has covered the ground so thoroughly that there is little left for me to say except possibly to enlarge on a few points which experience has brought out. I have estimated roughly that perfectly satisfactory analgesia is obtained in sixty-five per cent of the cases, partial analgesia in twenty-five per cent, and little or no results in about ten per cent. In the latter two groups, where the analgesia is either partly or entirely unsatisfactory, I believe the trouble lies in faulty technique, either not getting the catheter above the baby's head, a point which Dr. Levy emphasized, or not having a perfectly clean bowel, in which case much of the anesthetic is wasted.

A point which I do not think Dr. Levy stressed sufficiently is the importance of absolute quiet. Keep the family out, close the door, shut the window and stop the patient's ears with cotton. I have repeatedly noticed in cases in which the analgesia was perfect that the ear reflexes were the last to be obliterated. The patients have remembered none of the details of labor or delivery but have mentioned the slamming of doors or some other noise which occurred during the time.

Never, even when perfect analgesia is produced, does the patient fail to answer questions. In the second stage you can even encourage her to bear down. She is aware of no discomfort and is perfectly willing and able to assist you voluntarily. Even when the analgesia is not perfect nervousness is relieved. The patient lies perfectly quiet without using up her strength in apprehension and fear of the coming pain.

In a small number of cases, as Dr. Levy mentioned, there may be some slowing down of the labor. In such instances when the membranes were intact or even when they were ruptured and when the cervix was fully dilated we had no hesitancy in using small doses of pituitrin. In the cases in which because of the interests of the mother or the child labor had to be terminated by forceps the amount of ether given by the drop method must be carefull regulated. You will rarely find, even when a mid forceps delivery is necessary, that more than two or three drams of ether need be given to secure complete anesthesia.

Dr. T. B. Sellers: About four years ago I made a preliminary report on the use of nitrous oxide and oxygen in obstetrics. At that time I was favorably impressed with my results. During the past four years I have used it almost routinely. From my personal experience, and observation of the results of others, I am convinced that Nitrous oxide and oxygen analgesia is superior to any other in my hands.

I have used Gwathmey's synergistic analgesia in about ten or twelve cases, with practically the same results as those you have just heard reported. Its inexpensiveness and simplicity appealed to me, especially contrasting it with the cumbersome self-administering apparatus, for the administering of nitrous oxide and oxygen. I decided to give the synergistic method a try-out and, the results being equal, adopt the synergistic analgesia. Up to the present time I am still in favor of nitrous oxide and oxygen. I use morphine sulphate, 1/8 to 1/6 grain, and scopolamine, 1/200 grain during the first stage of labor. As soon as the effect wears off, then start the nitrous oxide and oxygen. It can be given from six to twelve hours without ill effects. The advantage of nitrous oxide and oxygen is that your patient is conscious except while she is taking the nitrous oxide and oxygen. She can converse with you between pains. Nitrous oxide and oxygen is applicable in at least 99 per cent of cases and about 85 per cent efficient in the point of analgesia.

Dr. F. Temple Brown: Dr. Levy is to be congratulated on his magnificient paper, in which some very important points in anesthesia in obstetrics have been brought out. The use of anesthetics in obstetrics is something which has been practised only during recent years.

A few years ago I purchased a gas oxygen apparatus for my obstetical cases. Prior to this I tried the hyoscine, morphine and cactin, which gives results something like scopolamine and morphine for relief of pain. I do not like scopolamine and morphine because it produces a great deal of delirium; many cases get wild, scream, and frighten everyone in the house. The last case in which I used scopolamine the patient kept trying to catch things off the wall—her people did not like it at all and got very excited about it, so I discontinued its use. About a year ago, in my service at Charity Hospital, I started using rectal or colonic anesthesia and like it very much. I did not have the Gwathmey method at first, but used three ounces of ether with one ounce of olive oil and Z7 of alcohol, ...?.... the only difference being that in the Gwathmey there is a little less ether in the preparation. Having used it in forty or fifty cases I can thoroughly agree with Dr. Levy regarding the satisfactory results obtained.

There is a point in technique, which I consider very important, that Dr. Levy has not brought out in his paper, viz: the time to start your rectal analgesia. The hypodermic of epsom salts, morphia, I think, ought to be given when you have two fingers dilation; then, when you get a little further on (three fingers), start your rectal anesthetic. It will slow up pain considerably in some cases but, as he states, small doses of pituitrin will keep up contraction. That has been the greatest trouble at Charity Hospital in our service: to get the intern to use this method; he gives it, goes off, the patient falls asleep, all pains cease and when he returns a couple of hours later there is very little progress. However, if you stay there and watch, giving small doses of pituitrin in cases which slow up, you will proceed and experience no trouble whatsoever. The solution is very cold and for that reason must be administered slowly. It is with difficulty that we get the patient to retain it, but this can be overcome by placing the patient's left side in the Sims position and producing pressure on the perineum by holding the nates together for about fifteen minutes; you will obtain a fair amount of absorption during this time and in five minutes smell ether on the patient's breath. When the fifteen minutes has elapsed place in any position desired.

Remember to watch your case—never leave her alone as she is liable to roll off the bed. This happened to me with a patient at Charity Hospital, who might have been seriously injured but, fortunately, was not hurt.

Dr. E. L. King: In regard to the use of ethylene in obstetrics I can say that I have, personaaly, had extremely good results with it, using it in a fair number of normal deliveries, several low forceps,

also two Cesarian sections in which it was the only anesthetic used. There is a definite slowing of the labor under ethylene, more so than in the use of other anesthetics. Extreme caution must be exercised towards the end, or the patient will practically quit: the primipara especially will slow down, making necessary the application of low forceps. I have not experienced any tendency to post-partal bleeding except in one instance, and in this case it was not alarming.

The following results were obtained in fifty cases in which synergetic analgesia was used—a few other cases in which it was given were terminated in other ways, so they are excluded from the list.

In 17 cases the analgesia was very good, eight of these being perfect, the patient having no recollection of the birth of the baby.

In 9 cases it was good.

In 9 cases fair.

In 5 poor.

In 10 a failure.

Total 50.

In seven cases, or fourteen per cent, it was necessary to resuscitate the baby. Some were easily resuscitated; in the case of the others, it took as long as ten minutes before they would breathe properly. There was one macerated syphilitic fetus and a monster with hydrocephalus and spinal bifida who died a couple of hours later.

In some instances I believe that our failure to produce results can be partly explained, and possibly wholly explained, by the fact that the anesthetic was administered either too soon or too late—in one or two cases the rectal anesthetic was given only ten or fifteen minutes before the baby was born and we could expect no results. The best effects in the rectal instillation are obtained when it is given two or three hours before the birth of the baby. If given longer than four to six hours before delivery our results were not so good—if too late, there was no chance of producing anesthesia. In the cases where the babies had to be resuscitated, there was apparently no relation between the time the anesthetic was given and the time of birth and no apparent relation to the time the morphine was given and the time of birth. In most cases two or three hours had elapsed before the birth, so I do not think we can charge the effect on the baby to morphine. In many cases there was a definite slowing of the labor, in one case particularly, a primipara, the anesthetic was given one morning, the cervix at the time being dilated three or four fingers, and the pains strong and regular. The patient did not have any pain for eighteen hours and was finally delivered under ether anesthesia, by inhalation—baby and mother were all right. There were some other cases in which the anesthetic was discontinued and ether was given by the drop method. Rectal anesthesia was given as per routine and as the patient did not deliver in the usual time, labor finally terminated in delivery under inhalation ether anesthesia. In four cases not included in this list the patients were delivered by low forceps for various reasons. In one case of face presentation, and one case of twins, the anesthetic did not have its full effect. Three times we used pituitrin to accelerate the labor after it had been slowed down with rectal anesthesia.

So, while we have adopted rectal anesthesia as a routine procedure, our results have not been quite as favorable as those of Dr. Levy, probably because the technique has not been as accurately developed, nor as carefully followed out. It has certainly one great advantage, which is not to depend on a third person, sometimes necessitating keeping an anesthetist waiting three to four hours.

Dr. E. E. Allgeyer: I am not going to discuss this essay from the viewpoint of synergystic analgesia but I merely want to say a few words about Ethylene and Nitrous Oxide analgesia in this work. My experience is principally with the latter; the former not having proved so satisfactory.

Ethylene it seems did increase the bleeding when the manufacturers first placed this gas on the market but the latest product, now greatly purified, has eliminated this to some extent.

The first time that I employed this gas in obstetrics, labor was stopped and believing that this may be a coincidence we again tried with similar results which made us discard it in preference to nitrous oxide. For operations which are at times necessary in this work we employ it entirely. In fact in eclamptic cases the increase in the amount of bleeding is a good means to decrease the height of the blood pressure.

Nitrous Oxide in our experience seems to produce the most desirable analgesia, for it only caused a cessation of labor in one instance and at no time were we ever alarmed about the condition of the child, as they always breathed inside of a few minutes.

The disadvantages to the use of nitrous oxide are the additional expense and the fact that in order not to prolong the use of the gas too much it is not customary to start until full dilatation of the cervix in primiparas or three fingers dilatation in multiparas, the patient having to stand the pain until that time. This, at that, can be eliminated if one either use a self administrater, in that event causing an obstetrician to become an anesthetist to a great extent or a hypodermic injection of morphine in magnesium sulphate can be given in order to relieve until the time is ripe to begin the use of the gas.

Dr. J. W. Newman: Notwithstanding that I have had the privilege of reading Dr. Levy's excellent paper, I cannot refrain from adding a few words to supplement his remarks, especially regarding anaesthesia in labor . . . not the choice of anaesthesia, but the necessity of administering an anaesthetic in all cases of labor. Those who have had great experience in obstetrics have, undoubtedly, seen a number of cases where the neglect to administer any anesthetic has endangered both mother and child, for example: the woman starts to bear down long before the cervix has completely dilated, then, when the critical time has arrived and she should give assistance by bearing down, she has reached the stage of exhaustion and an accouchement force is necessary. Again, in these cases where the child's head is being subjected to trauma on account of a rigid, unyielding cervix; then when the cervix has completely dilated and the child's head passes through instead of the woman being under the influence of an anaesthetic whereby the childs head is allowed to assume its normal condition, the mother bears down again subjecting the head to pressure against the rigid perineum. Result, the child is born dead. Time does not permit me to discuss the virtues of each anaesthetic spoken of, but there are two points regarding synergistic analgesia to which I wish to call your attention and must receive consideration at our hands.

(A). Labor is undoubtedly slackened through giving synergetic analgesia, but this can be overcome to a great extent by giving quinine by mouth. We employed this method successfully

when using Gwathmey's oral method of ether anaesthesia. I do not think this method had ever been tried before in obstetrics. The results were very good. We discontinued its use because several surgeons of Base Hospital No. 24 in France who had had experience with this method in surgery, considered it dangerous.

(B). In cases where complications exist we must take into consideration the possible influence of ether on the resuscitation of the child, for example; A short time ago we were compelled to apply mid-forceps in a primiparae. The child was delivered in a state of asphyxia with the cord around its neck. Such cases we know are difficult to resuscitate, add to this the fact that the child's breath smelled strongly of ether, you will realize that through this unhappy chain of circumstances, that is mid-forceps, cord around the neck and the child intoxicated from ether, the resuscitation was very difficult. We certainly cannot blame the ether for the child's death, but there is no doubt that it was one of the contributing factors.

A word in regard to scopolamine and morphine. I think I was the first and one of the most ardent advocates of this method in New Orleans, using it in over one hundred cases, with very good results in some, pretty good in others, rather poor average in all, but in our last series nothing but poor results. One of the most enthusiastic advocates of twilight sleep lives in your home state. About two years ago she visited in this city and gave a most detailed description before this body of her work with "Twilight Sleep." She assured us that her results were excellent, that it never became necessary to restrain patients and that the anaesthetic was perfect, obviating the necessity of assisting even with small inhalation of ether. Her results were so far superior, even to those achieved in Freiburg, that I deemed it advisable to study her methods carefully and therefore sojourned to Chicago where I spent some time observing the cases in her department. The poor results achieved even with the use of mechanical devices resembling straight-jackets made me decide at once never again to employ this method of analgesia. A few days ago an article appeared in the daily press stating that Mrs. Nicholas Longworth had been delivered by Dr. Jos. De Lee of Chicago and that one of the principal considerations in her selection of an acchoucher was her desire to have twilight sleep and that her wish had been granted, that is, twilight sleep successfully employed. Knowing Dr. De Lee's antagonistic attitude toward "Twilight Sleep" I wrote to him regarding this newspaper article and asked what had brought about the change in his opinion regarding this method of anaesthetic. Imagine my surprise when I received an answer from him, the first lines of which read as follows:

"My attitude regarding twilight sleep has not changed and Mrs. Longworth did not have twilight sleep."

I feel that I would be derelict in my duty both as an obstetrician and as a citizen if I did not avail myself of this opportunity to denounce publicly those who are responsible for the appearance of such articles in our daily press, issuing false statements for the purpose of personal propaganda and thereby creating an erroneous impression in the minds of the inexperienced obstetrician by most disastrous results to the mother and her child.

Dr. Walter E. Levy (concluding): I wish to call more attention to that diagram. It shows that you should get above the head or presenting part with the catheter. The head then acts as a ball valve. If the instillation is not placed above the head it will be forced out as the head then acts like the piston of a plunger.

I did not go into detail with every anesthetic,—I could not in the limited time placed upon this paper; I merely wanted to hit the high spots, show why we rejected some and used others, and to bring out the discussion.

I think that synergistic anesthesia is something that is going to be really worth while, perhaps not so much in Hospital service where we have an anesthetist always at hand, but rather in home practice. I had occasion to go to Hammond to speak before their society and I advocated this for country practice. It differs from twilight sleep; the effect produced by the latter is not anesthesia, not analgesia, but amnesia; they are having the pain and everything else but do not remember it. And remember, a case of twilight sleep has to be most carefully watched.

I had occasion to hear Dr. Gwathmey speak on rectal anesthesia and he claims that following his technique and using the standard mixture of ether, 2 1-2 oz. olive oil, 1 1-2 oz. quinine 20 gr.; and alcohol, 3dr, we are thirteen times within the zone of safety.

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PROFESSOR G. JEANNENEY

AND

THE CANCER PROBLEM IN FRANCE

On October 13, 1924, the Orleans Parish Medical Society held a special meeting in honor of Professor Jeanneney of Bordeaux. In introducing the distinguished lecturer, Dr. Matas referred to the triple mission that had brought Prof. Jeanneney to New Orleans. He had come as a delegate of the French government to report on the progress of the cancer problem in the United States and had visited all the leading medical centers of this country, including Canada. He had come as a delegate of the French Association for the cultivation of the medical and scientific relations between France and the friendly and allied countries. As a member of the faculty of the ancient capitol of the Gironde, he had brought the greetings and good will of the Faculty of Bordeaux to the metropolis of Louisiana, in testimonial of the traditional friendship which has existed between the people of the vine clad hills of the Garonne and the people of New Orleans, where the French language and the French traditions were still preserved as a relic of old colonial days, and in a way that always warms the heart of every Frenchman who visits this city.

Not long ago Professor Portmann, of Bordeaux, had visited New Orleans as the associate of Professor Moure, the founder of the Ear, Nose and Throat specialty in France. Dr. Portmann had lectured and operated here in the hospital founded by Dr. deRoaldes, the founder of this specialty in New Orleans. Dr. deRoaldes was a great friend and admirer of Prof. Moure and frequently visited his clinics in Bordeaux. It was from this source that much of the pioneer work of Dr. deRoaldes in New Orleans was inspired. The contributions of Bordeaux,—the birthplace of Montaigne and of Montesquieu,—to the scientific progress of medicine and surgery were well known and especially appreciated in this city, where the profession, with good reason, now accorded a hearty welcome to Professor Jeanneney, who so fittingly represented his country, not only in his official capacity, but through his brilliant and engaging personality. Professor Jeanneney, though young in years, has achieved extraordinary success in his scientific and medical career. He is an indefatigable worker as investigator and writer. Within the thirteen years that had followed his agrégéship in Bordeaux, he had contributed over 150 papers on a great variety of subjects, including in these a number of original studies in anatomy, physiology, teratology, vaccine therapy, and, especially, oscillometry in its application to surgery. As a pupil of Pachon, he popularized the ingenious instrument designed by that distinguished physiologist by adapting it to the study of the peripheral and collateral circulation in determining the viability of the dependent parts before and after the ligation of the great vessels and in threatened gangrene of the extremities. In fact, the value of oscillometry as an index to the condition of the circulation has been demonstrated and made more thoroughly practical by Jeanneney's original and numerous clinical and physiologic researches, than by any other living observer. These researches have won for him, among other honors, the gold medals and coveted distinctions of the Prix Goddard, Delord and Marjolin-Duval of the French National Surgical Society, and, last but not least, the Croix de Guerre for his war service in 1915.

At the close of his lecture on Cancer, delivered in English, he gave, by request, a very illuminating and interesting demonstration of the application of oscillometry to surgical problems with the aid of the Pachon instrument. It is therefore with more than usual pleasure that we publish in this number of the Journal a brief summary of Professor Jeanneney's instructive lecture, together with a record of a very interesting and agreeable occasion.

S. M. D. CLARK

It is with profound regret that we chronicle the death of our beloved confrere, Samuel Marmaduke Dinwiddie Clark. A leader among Southern gynecologists; ever a champion of organized medicine; a teacher ever-popular with his pupils; in a word—a man. Dr. Clark's untimely death occurred on April 26, 1925.

He was born July 28, 1875, at Devall, West Baton Rouge Parish, Louisiana, and received his early education from private tutors. He graduated from Louisiana State University in 1895, obtaining a B. S. degree. In 1900 he received his M. D. degree from Tulane university. In 1902 Dr. Clark married Miss Elise Cockerham, of Natchitoches, Louisiana. He served internship at Touro Infirmary and Charity Hospital, New Orleans.

Dr. Clark served on the medical faculty of his Alma Mater for twenty-two years. He was made assistant demonstrator of operative surgery in 1903; was appointed chief of clinic, chair of obstetrics and diseases of women and children 1904-1905; was lecturer and clinical instructor in gynecology and obstetrics in 1905; was associate professor of gynecology from 1911 to his death.

Dr. Clark was a familiar figure at parish, state and national medical gatherings. He served the Orleans Parish Medical Society as secretary and was secretary of the Charity Hospital Alumni Association.

During the World War Dr. Clark served with rank of major and was assigned to surgical group No. 4, in France. He was a fellow of the American College of Surgeons, fellow of the American Medical Association, Southern Surgical Society, member Louisiana State Medical Society, Orleans Parish Medical Society, etc. He was a member of the Blue Lodge of the Masonic Order, a member of the Boston Club, the Audubon Golf Club, New Orleans Country Club, Metairie Country Club, Kappa Sigma and Phi Chi Fraternities.

Dr. Clark's contributions to medical literature were ever timely and constructive. Among his most notable papers might be mentioned: "The Value and Limitations of the Pessary in Gynecology"; "Discussion of Cesarean Section"; "Preliminary report on the use of the Percy Cautery in carcinoma uteri, with special reference to its use as a forerunner to the Wertheim Operation"; "The Value of the Combined Method in the Treatment of Cervical Carcinoma;" "The Treatment of Pelvic Infections Should be Standardized."

Doctors W. J. and C. H. Mayo, upon learning of Dr. Clark's death paid the following tribute: "Through the death of Dr. Clark there has been lost to the medical profession one of its foremost exponents. For a quarter century he has made many splendid contributions to medical science. He was a public spirited citizen of high character and a true and loyal friend."

Dr. S. M. D. Clark
1875-1925

Dr. William D. Haggard, president of the American Medical Association, recognizing the great loss to American medicine in the death of Dr. Clark, paid fitting tribute in a message to Mrs. Clark.

His geniality won him friends instantly, and his loss, as surgeon and as teacher, will be keenly felt by his friends and pupils alike.

FELLOWSHIPS FOR GRADUATE WORK IN OBSTETRICS AND PEDIATRICS

The Tulane School of Medicine has just received a gift of funds for the purpose of establishing a model obstetrical clinic and for the purpose of providing two fellowships in obstetrics and one in pediatrics to graduate students in these subjects. The funds which make this possible have been given by the Junior League of New Orleans and the fellowships are to be known as the Junior League Fellowships.

The details of the courses to be given and the work to be done by the students have not all been worked out. The courses will take some two or three years to complete and would include, not only intensive work in the particular specialty, but also a considerable amount of work in certain fundamental branches bearing upon these specialties. The student will be required to do a considerable amount of research work and to present one or more acceptable thesis covering his research. Upon satisfactory completion of the course, the fellow will then be granted a higher degree, either Bachelor or Master of Science, from the Graduate Faculty of the Tulane University.

These fellowships will afford wonderful opportunities for ambitious men and women who, after graduating in medicine and after having had one or two years of hospital internship, wish to continue their studies and perfect themselves in obstetrics or pediatrics. These fellows will receive stipends of sufficient amount to maintain themselves while pursuing their work.

Applications are being received and it is hoped to be able to make selections and have one or more fellows start early in July.

AUGUST VON WASSERMANN

The death of Professor August von Wassermann on March 16, 1925, has deprived the medical world of one of its ablest investigators and the human race of a benefactor. Through his continued studies he has made several lasting contributions to the body of knowledge basic to general race betterment.

Wassermann was born February 21, 1866, at Bamberg, Bavaria. His father was a royal banker who gave his son the opportunity to gain a sound general and professional education. Wassermann studied medicine at the universities of Erlangen, Munich, Vienna and Strassburg, receiving his degree from the last named institution in 1888. He then became assistant for infectious diseases at the Koch Institute of the Charite at Berlin, gaining the title of professor in 1898. In 1901 Wassermann was given an appointment to the University of Berlin as Professor Extra-Ordinary (Privatdozent), a position carrying with it no emoluments outside of the opportunity to teach and experiment in the university medical school and its laboratories. Within a year his unselfish devotion and keen interest in the science of medicine brought him a full professorship. In 1906 he assumed the duties as head of the Division for Experimental Therapy and Serum Research at the Royal Institute for Infectious Diseases at Berlin. In 1913 he added to his duties those of director of the newly founded Kaiser Wilhelm Institute at Dahlem, near Berlin, an institute for experimental therapeutics.

As a mark of appreciation of beneficial public service the title of Secret Councillor (Geheimrat) was conferred upon Wassermann in 1907; he was also awarded the Japanese Order of the Holy Treasury, the Turkish Order of Ozman, the Spanish Order of Elizabeth the Catholic, and the Reichs Alder Order.

Professor Wassermann was a prolific contributor to medical literature. As an introduction to Ebstein and Schwalbe's Handbook of Practical Medicine, he has written an able discussion concerning general studies on infectious diseases, especially influenza. He was also a regular contributor to the Eulenburg Encyclopedia, writing on immunity and serum therapy. He published many articles on newer subjects, such as hemolysin and precipitin. His best known works are contained in the Handbooks of Pathological Microorganisms, which he published in collaboration with Kolle.

Wassermann made a far-reaching and important contribution to forensic medicine by "his precipitin reaction which distinguishes the blood of men and animals by differentiating albumin bodies contained therein."

His greatest discovery, the complement fixation test in syphilis, was announced in 1906. This, the so-called "Wassermann Test," is an application to syphilis of a general reaction discovered by Bordet and Gengou.

An appreciation of the vast importance of the use of the Wassermann test as an aid in the diagnosis and treatment of syphilis may be gleaned from data collected and compiled by the Division of Venereal Dis-

eases of the United States Public Health Service. The 165 laboratories of State Health Departments and State Institutions, scattered throughout every state in the Union and included in this investigation, administered 990,130 Wassermann tests in 1923. This figure, when reduced to more evident terms, means that these 165 state laboratories have given one Wassermann test per every 106 people in the United States. The importance of the Wassermann test is further enhanced by the fact that these figures do not include many Wassermann tests made by private laboratories.

Though Wassermann's name has been connected with important researches dealing with the problems of cancer and tuberculosis, he has enshrined his name in medical annals by virtue of his work in the diagnosis and treatment of syphilis. Wassermann, a distinguished pupil of Koch and Ehrlich, has earned the name of a great benefactor of humanity.

MEDICAL ECONOMICS

Some twelve months ago, while homeward bound on a Pullman, after having attended the annual meeting of the A. M. A. at Chicago, two members of the Journal Committee were discussing the problems of our *Journal* and the question arose as to how we could make its interests more far-reaching and its columns more interesting.

In the midst of the discussion the two committeemen were joined by Dr. Chas. A. Bahn and he volunteered the suggestion that a department devoted to medical economics might prove of interest and benefit to our readers. The suggestion met with hearty approval all around and Dr. Bahn was asked on the spot to edit such a department. He consented with the proviso that he be allowed a 'question and answer' column and that he receive the support of the readers in determining just what matters interested or puzzled them most.

In this fashion the "Medical Economics" department was launched and Dr. Bahn has contributed most liberally of his time and energy to make this department one worth reading. If anyone still questions the soundness of such contributions he has only to read "Part 9," which appeared in the May issue to be convinced. Dr. Bahn's philosphy furnishes much food for thought and his arguments are based on a practical knowledge that is irrefutable.

Now, the Editor desires to make an unusual request of our readers, and that is that you write to Dr. Bahn telling him just what phrase of medical practice interests you most. In every issue he has asked that readers send in questions and suggestions, in the interest of this department, but so far has met with little co-operation.

Do you, or do you not, wish this department continued. It began as an experiment and we feel that it has added materially to the value of our *Journal*. But we want your opinion. Address communications to Dr. Bahn direct. Thank you.

VENEREAL DISEASES

An increase in the number of cases of venereal disease reported in the United States in the year which ended June 30, 1924, over the number reported in the previous corresponding year is disclosed by the figures recently made public in the annual report of the Division of Venereal Diseases of the United States Public Health Service. The report indicates that the increase in the fiscal year 1924 amounts to 27,382 cases, of 7.2 per cent. A total of 363,063 cases of venereal disease were reported to the various state boards of health from all sources. This total was composed of 193,844 cases of syphilis, 160,790 cases of gonorrhea, and 8,429 cases of chancroid.

"The fact that the 1924 statistics show an increase over those for 1923 does not necessarily mean that venereal disease was any more prevalent in the United States last year than in the year before," explains the Chief of the Division of Venereal Diseases.

"The greater number of cases now on record at the state boards of health," he continues, "may well be accounted for by the increased efficiency in detecting these maladies and by more conscientious reporting of cases on the part of private physicians. For a long time the danger from syphilis and gonorrhea was greatly enhanced by the fact that these diseases were carefully covered and concealed and were often kept secret even from physicians who might have brought about a cure. Fortunately, people are now learning that they must go to a reputable physician or clinic if they wish to be cured, and laws requiring that these cases be reported to the state boards of health are making it possible to obtain some idea as to the prevalence of syphilis and gonorrhea in the country, although there are many cases that still escape discovery."

During the fiscal year just passed, 504 public clinics reported to the state boards. The clinics treated 118,023 new cases of venereal disease made up of 65,046 cases of syphilis, 49,029 cases of gonorrhea, and 3,949 cases of chancroid. A total of 2,147,-087 treatments were given. The fact that these clinics made 302,152 Wassermann tests for detecting syphilis and 203,008 examinations to discover gonorrhea would seem to indicate that people are beginning to realize the terrible consequences that follow in the wake of these diseases and are willing to take advantage of reputable opportunities for cure.

Reports from 37 correctional and penal institutions were received by the Division. The efforts of those in charge of these institutions have resulted in a large increase in the number of venereally diseased persons discovered and treated. New patients to the number of 7,045 were admitted to treatment in 1924, an increase of 44 per cent over the year 1923.

The menace of venereal disease is one that is being fought by the United States Public Health Service and the various state boards of health acting in connection with municipal health officers. These governmental agencies are trying to impress upon parents, teachers, young people and others the need of wholesome sex education, of prompt medical attention and the necessity for the passage of modern health ordinances and legislation. Among the social institutions which can aid in the fulfillment of this program are the home, the school, the church and the press.

RECOVERED LEPERS DISCHARGED FROM NATIONAL LEPROSARIUM

Four lepers who went to U. S. Marine Hospital No. 66, Carville, Louisiana, the National Home for Lepers, a few years ago, have been discharged, according to a statement made today by Surgeon-General Hugh S. Cumming, of the United States Public Health Service. They are no longer a menace to the public health, the disease having been cured, or, according to official parlance, "arrested." The conditions under which lepers are released from this institution are exceedingly rigid. They require special observation for a period of one year, including monthly bacteriological examinations to show that the leprosy bacillus is absent from the tissues. Certification of cure is also required from a board of three medical officers stationed at the hospital and experienced in leprosy.

The treatment at Carville includes the use of chaulmoogra oil, special preparations of mercury used intravenously, X-ray therapy, surgery of superficial areas of involvement, hydro-therapy, and the violet ray. The results of treatment have been sufficiently encouraging at this institution to induce numerous other patients, of whom there are believed to be several hundred in the United States, to agree to their transfer. A special car fitted up for the purpose, and carrying a doctor and a nurse was used in the transfer last week of eleven patients from Florida, and seven were brought from California. There are at present 236 leper patients at Carville.

LOUISIANA STATE MEDICAL SOCIETY

ANNUAL ORATOR'S ADDRESS.*

HON. MARTIN BEHRMAN.

MAYOR OF NEW ORLEANS

When I was offered an invitation to speak tonight at the annual convention of the Louisiana Medical Society I cheerfully accepted it. One of the hobbies of my public career and one that has sometimes been the subject of criticism, has been my attendance at conventions. I have, however, always held to the view that conventions are among the best possible mediums for the exchange of advanced thought on any scientific business enterprise and that the delegates who usually attend such gatherings are the very best visitors a city can entertain.

This very convention does much to emphasize the correctness of that view. You come here, the leaders of your profession from many localities in this state and nation for four days of general discussion and study of the greatest problem that confronts mankind—the preservation of human life and the relief of human kind. There is no nobler mission, no loftier endeavor in the scheme of civilization and your profession not only benefits itself by your convention, but we, your hosts, are considerably enriched by your presence.

While like most laymen, I cannot be expected to be able to discuss the things that are uppermost in your minds tonight, you must remember that for many years I have been a public official in this great metropolis, where I have had the opportunity of recognizing the fact that public health is almost as much the concern of the intelligent laymen as of the physician himself. In New Orleans especially this view has come home to us through a long series of bitter experiences. We have had here more trying and difficulty problems to solve than have ever confronted and handicapped any other great American city. We have known plagues and epidemics, deadly fevers and devastating diseases and we have Thank God, I hope overcome them forever.

There are many of you here tonight who were quite young men when I first came into prominence in a public sense in New Orleans. Most of you are aware that for 16 years I was mayor of this city and was at its helm during all the times when New Orleans was looked upon as a pariah among the cities of the American Union. Looking back upon that time I can visualize better than most, the mighty struggles we made to rescue the Crescent City from the blight of plagues and fevers that threatened not only to lay waste the lives of its citizens and wreck its commerce but to make it one of the feared places in this country. I have therefore a deeper appreciation of the nobility and self-sacrificing devotion of your profession than is probably held by the average citizen.

Many of the gigantic strides which New Orleans has made as a port, and most of its modern advancement as a great city can be traced to the foundation it laid in making itself a city where health preservation became a hobby. You know that this city was frightfully handicapped in its early modern growth. It had inherited from an old and if you are pleased to call it a romantic age, a condition of squalor and filth and a lack of sanitation which was positive invitation for the spread of every disease known to medical science.

Some of you may recall the days I am describing. Our sewerage found its way to open canals through open gutters which lined each side of our streets. Ordinary sanitary conveniences of life were unknown among the bulk of our population. Our drinking water was provided by wooden cisterns exposed to every infection known to weather and atmosphere. Swamp infested areas occupied prominent spaces in our suburban communities. Mosquitoes and rats, sure carriers of all germ diseases, threatened the very life of our population.

With regularity we were visited with the deadly plague known as yellow fever. It was not unusual for nearly all the adjoining states to quarantine against our population and to outlaw us from all kind of travel. We slowly came to recognize these horrible visitations as a menace not only to our development but to our lives and property, and began to look around for measures to end this plague. We found that to do so we must sewer and drain our city, that we must provide our population with healthy drinking water, that we must banish the open gutter and the filthy canal, and that we must clean our streets.

The history of the battle waged by New Orleans to rid itself of the dread fever is too well known to you for elaborate recital.

*Read before the Louisiana State Medical Society, April 21, 1925.

A great deal of it is the history of the development and growth of a great modern city. But to awaken to a realization of our needs we were forced to listen to the voice of the medical profession which pointed the way.

Yellow fever had hardly gone when we were faced with the dread epidemic of bubonic plague. The fight made by the city of New Orleans in this instance will always remain a tribute to the resourcefulness of our people and a monument to the medical profession of this city and to the United States Health service. Millions of dollars were spent in rat proofing our wharves and docks, in tearing down and rebuilding thousands of residences. It seemed at first a great hardship, but it, like all great reforms, has since proved itself one of the greatest investments this city has ever made.

And so we have gradually worked our way up to the front rank among the healthy cities of this country. A steadily declining death rate testifies most eloquently to our progress from those unhappy days to the present. And in doing this we have been building a great modern city on the ruins of an old world sea port.

How much of this we owe to the medical profession, and especially to our own health authorities no man is able to say. We certainly owe most of it.

New Orleans today, as I have said, is among the healthiest cities of the country. When I came into office years ago it was generally considered something of a risk to visit the Crescent City. This impression persisted for many years even after we had our battle won and about six years ago we undertook to let the nation know just how far advanced New Orleans was and what a safe place it was to work and live in. We spent nearly $100,000 in presenting this city to the American republic and I believe we never made a better investment. There were those who could not see the purpose and effect of this campaign but I doubt seriously if there is a city in the United States today which occupies a more favorable or pleasant place in the minds of the American public than this old city.

And most of this has been accomplished upon the foundation laid by the medical profession of this city, state and nation. That profession has shown us the wisdom of building well for the future; has pointed out to us that in the health of a state or nation lies its prosperity.

To my mind the greatest fight the medical profession has to make is to arouse public conscience to an appreciation either of the dangers of a certain course or the advantage of another. Ignorance is the enemy of science and it is sometimes strange to behold the ignorance of the public. Why, if in my day the medical profession had attempted to show the way to health and long life by taking the child from its earliest days in school, in insisting upon plenty of outdoor regulation, in teaching them the rudiments of sanitary living, in instructing them to care for their teeth and eyes, it would have been considered as encroaching upon the rights and privileges of the parent.

But every day and everywhere we find larger evidence of the success of your efforts. We find public officials today who but a little while ago would have looked upon the health officer as a necessary evil, working hand and hand with this health officer for the accomplishment of better things. It is the new spirit of modern America, the spirit which has developed the greatest race the world has ever known and will continue to develop an even greater one. And to your profession goes the largest share of the credit for this advancement, for this new spirit. You have shown us how to develop healthy minds in sound bodies and we have but followed your lead.

In New Orleans we have still more to do. In recent years we have taken up the task of building a few badly needed modern hospitals but we have but scratched the surface. There is much ahead of us. Our great public hospital where the poor and the needy must look for treatment should be among the finest in the world. While all states and municipalities must be governed by their limitations, I sometimes think that we should not bargain and bicker too much in our expenditures nor attempt to draw too tight the line of economy where the lives of our citizens are at stake.

Within a few days I shall take up again the duties of being mayor of this city for another five years. In my platform seeking election, one of the promises I emphasized throughout the campaign was unqualified co-operation with city and state health authorities for the advancement of sanitation and public health. That promise I expect to religiously keep. I shall merely ask to be shown the way and you may depend upon my community leadership.

I thank you.

Report of the House of Delegates to the General Assembly, April 23, 1925, New Orleans Meeting

Gentlemen: In accordance with the constitution and by-laws, the House of Delegates wishes to report the following actions representing their deliberations and business transacted by them at the present meeting.

The House of Delegates was highly honored by the presence of Dr. Rudolph Matas during its early deliberations, who, in a very appropriate talk, spoke of some of our medical progress and present status of our medical organization.

The various meetings and minutes of the Executive Committee, Council, Report of Councilors and standing and special committees were read and properly disposed of. The President's Report was replete with recommendations and upon the report of the special committee, the following recommendations were adopted:

First: That the ambulatory treatment of drug addiction, as far as it relates to prescribing and dispensing of narcotic drugs to addicts for self-administration at their convenience, be emphatically condemned.

Second: That it is the sense of the House of Delegates assembled that it be considered unethical for any member of this Society to testify against a fellow member in a damage suit when the circumstances have been duly investigated and defence authorized by the Committee on Medical Defense.

Third: We recognize the great benefit to accrue to organized medicine from the expansion of the Tuberculosis and Public Health Association of Louisiana, and we endorse the President's recommendation of this society, and we further recommend that it be considered one of the duties of the Councilors to foster the development of this association.

Relating to the President's recommendation for an increase in the Executive Committee, we recommend that six members at large be added, and that eight members constitute a quorum, and we recommend that at the annual meeting six members be elected by the House of Delegates, three members to serve for one year, and three for two years, and that at each annual meeting thereafter three be elected to serve for two years.

Relative to the President's suggestion concerning standing committees, we recommend that all standing committees of the House of Delegates be required to hold at least two meetings a year, and that they be given initiatory powers along their lines, this, however, is not to be construed as giving the power of action without the approval of the House of Delegates or the Executive Committee.

The Secretary-Treasurer's Report was read and referred to a committee, and the following report was adopted by the House of Delegates, whose report, which was adopted, contained the following recommendations:

"This committee on the Secretary-Treasurer's Report is highly in accord with the Secretary's recommendation regarding periodical health examinations, and hope this body will take proper steps to investigate this matter thoroughly, and initiate a plan whereby this meritorious work can be carried out. We would suggest a committee of three be appointed to properly handle this matter."

Upon recommendation of the Committee on Scientific Work, the Section on Dermatology was placed under that of General Surgery, which gives that section nine papers instead of seven. An essayist desiring to read on dermatological subjects can do so under the Section of General Surgery.

The Committee on Medical Defense made a very interesting report, which was considered by the said Committee on President's Address and disposed of in the recommendations recited above.

The Committee on Budget and Finance submitted their report and all their recommendations were adopted.

The Journal Committee made a report covering the activities of the Journal. Attached thereto was a financial statement for the past nine months. They were granted the privilege to increase their subscription rate to $3.00 instead of $2.00 upon recommendation of the committee, owing to the increased circulation and changes in the physical aspect of the Journal. A Censor Committee for the Journal was appointed, composed of the Editor, the Business Manager, and Chairman of Section under whom the paper was read, for the purpose of editing and preparing papers read before the Louisiana State Medical Society for publication.

The report of the Committee on the Care of Indigent Physicians was received, and after being referred to new business was disposed of.

The Report of the Committee on Walter Reid Memorial showed that at the present time there was in the bank $442.79.

The Committee on Hygienic Marriage Law made a very interesting report, covering the activities of this committee before our State Legislature, and the present status of the Hygienic Marriage Law as in comparison to what is desired by the Committee in their modern hygienic law.

The report of the Louisiana State Board of Medical Examiners was replete with many items of their activity, and was received and filed.

The House of Delegates passed an amendment to the Charter providing for the election of a President Elect, upon the report of the Special Committee appointed at our Opelousas Meeting, who drew up the proper changes in our Charter for same.

Upon the receipt of a letter from Dr. Wm. C. Woodward, Executive Secretary of the Bureau of Legal Medicine and Legislation, soliciting the aid of our Society in a national program to help reduce the tax of physicians, a special committee was appointed and drafted appropriate resolutions to be sent to the President of the United States, the Secretary of the Treasury, our Senators and Representatives, and the American Medical Association. These resolutions condemned the unfair tax condition on the physicians which now exist, asking that the President recommend suitable legislation for their recommendation and amelioration. Upon motion duly made and seconded. the Secretary-Treasurer was instructed to pay to the Annual Arrangement Committee each year 50c per capita based on the annual enrollment previous to the annual meeting.

Applications were made upon the House of Delegates by the parishes of La Salle, Livingston, West Carroll and Richland for charters, and the Secretary-Treasurer was instructed to issue same as soon as the necessary formalarities were complied with, upon the authorization of the Executive Committee.

The Committee on Public Policy and Legislation presented a very replete review, covering the activties of this committee, especially at the recent session of the Legislature, where it became necessary to combat medical bills which were antagonistic to our medical act, and likewise to support measures which were introduced for the betterment of the practice of medicine. Chief among these were the defeat of the Chiropractice Bill, which was sponsored by a well organized group of men who did all in their power to amend the medical act permitting the practice of Chiropractics. This attempt was overwhelmed in the Committee of Legislature and never reached the floor of the House.

The matter of the physicians' occupational tax was brought up again before the House, and after some considerable discussion was referred to the Committee on Public Policy and Legislation for attention.

The Resolution Committee presented the following resolutions which were unanimously adopted:

"Whereas: The Ladies, the Local Medical Profession, Mayor of the City of New Orleans, Chairman of Committees on Local Arrangements, Hotel Dieu, Presbyterian Hospital, Tulane University, Roosevelt Hotel, and Local Press have left nothing undone to make the present meeting of the Louisiana State Medical Society both pleasant and profitable;

Be It Resolved, That the thanks be extended on behalf of our Society to all concerned for their gracious and untiring efforts to make our stay in their midst most pleasant and profitable.

Whereas: The officers and clerical force of the Society have been untiring and successful in their efforts to maintain the strength and dignity of our Society during the past year;

Be It Resolved, That the thanks of the Society be extended to our past officers and the office force for their unfailing devotion to our beloved Society.

Whereas: It has been generally commented that the business of this meeting has been transacted with such punctuality and smoothness that the fact that there was a machinery of operation was scarcely apparent.

Be It Resolved, That thanks and appreciation be extended to our Secretary-Treasurer, Dr. P. T. Talbot, and his assistants, whose foresight and efficiency rendered the above possible."

Monroe, Louisiana, was selected as the next meeting place for 1926. Dr. L. J. Menville was re-elected Speaker of the House.

In the appointment of Fraternal Delegates to our various Southern Medical Associations, the Secretary-Treasurer was instructed to make these appointments as he possibly would be in a better position to know the various members who might be in attendance at the respective state meetings.

The following officers, after being duly nominated, were elected to office:

President, Dr. E. M. Ellis, Crowley.

President-Elect, Dr. S. M. Blackshear, New Orleans.

First Vice-President, Dr. F. J. Chalaron, New Orleans.

Second Vice-President, Dr. J. A. White, New Orleans.

Third Vice-President, Dr. L. B. Crawford, Patterson.

Councilors.

First District—Dr. H. E. Bernadas, New Orleans.

Third District—Dr. F. T. Gouaux, Lockport.

Sixth District—Dr. C. A. Weiss, Baton Rouge.

Seventh District—Dr. V. A. Miller, Lake Arthur.

Eighth District—Dr. S. J. Couvillon, Moreauville.

Committees.

Scientific Work—Dr. P. T. Talbot, chairman; H. P. Jones, Elizabeth Bass.

Public Policy and Legislation—Drs. E. A. Ledbetter, chairman; E. L. Leckert, Roy B. Harrison, President and Secretary-Treasurer.

Publication—Dr. P. T. Talbot, chairman; Drs. P. S. McIlhenney, J. J. Ayo.

Medical Education—Drs. S. C. Barrow, 3 years; Maurice Gelpi, 2 years; J. A. Lanford, 1 year.

Medical Defense—Dr. R. O. Simmons, chairman; Dr. P. T. Talbot, Dr. E. L. Sanderson.

Journal Committee—Dr. H. W. Kostmayer, three years; Dr. Oscar Dowling, three years.

Hospital Committee—Drs. R. C. Ducote, Chas. Chassaignac; J. L. Scales, O. P. Daly, C. P. Gray.

Health and Public Instruction—Drs. W. H. Seemann, F. R. Gomila, G. M. G. Stafford, J. Q. Graves, J. K. Griffith.

Delegate to A. M. A.—Dr. W. H. Seemann, 2 years; Alternate, Dr. Paul Gelpi, two years.

Respectfully submitted,
P. T. TALBOT,
Secretary-Treasurer.

To the House of Delegates,
In Session 1925.

Gentlemen:

Your special committee to consider the communication received from the Bureau of Legal Medicine and Legislation of the American Medical Association, have carefully considered the material and offer the appended resolutions for adoption by this Society.

Respectfully submitted,
W. H. Seemann,
Chairman,
A. A. Herold,
R. O. Simmons.

Whereas: Published reports indicate that the President of the United States will submit to Congress, in December next, recommendations for reduction in federal taxes, and

Whereas: The tax on traveling expenses necessary for attendance at meetings of medical societies, and the tax on the expense of post graduate study, constitute discriminating and unjust taxation, penalizing the pursuit of knowledge for the public good, while the pursuit of business is untaxed, and

Whereas: The amount of the war tax under the Harrison Narcotic Law is no longer justified, especially in view of the fact that other war taxes have been very generally abolished, and the continuance of the two hundred per cent increase over the amount necessary constitutes a grave and unjust discrimination against the medical profession; therefore

Be It Resolved: That the Louisiana State Medical Society in regular annual session assembled protests against the unfair tax condition existing, and respectfully calls same to the attention of the Secretary of Treasury and requests that he recommend the necessary measures to bring relief from these conditions.

Be It Further Resolved: That our Senators and Congressmen be requested to call the attention of the President and Secretary of the Treasury to the wide spread demand on the part of the medical profession for a removal of the discriminating existing taxes.

Be It Further Resolved: That each member of our Society be requested to personally enter his plea with his Congressman and Senators for relief in the premises.

Be It Further Resolved: That copies of these resolutions be transmitted to his Excellency the President of the United States, the Secretary of the Treasury, the Senators and Congressmen of Louisiana and the American Medical Association.

MEDICAL PROGRESS AND THE INFLUENCE REFLECTED ON IT BY ORGANIZED MEDICINE*

J. J. HARALSON, M. D.

FOREST, MISS.

I presume that the motive which constrained you to so greatly honor me in your election of me to this distinguished position was induced by my long membership in this Association, for I can lay claim to no outstanding service to the body. It has been thirty-eight years since I became a member of the Association, and during that period, I have been absent from its sessions four times. Of the roster of membership at that time, I can now think of only ten who are still with us in our association, and only about one-half of these are regular attendants. The others have either passed to the Great Beyond or are otherwise precluded from participation in our activities.

The high honor you conferred impresses me with a deep sense of the responsibility that I feel on this occasion. I now realize its magnitude. The admirable manner in which you have been presided over in the past renders it difficult, if not impossible, for me to approach the standard of excellence set by my predecessors. As you know, I am not a parliamentarian, but I shall endeavor to do my level best to preside with fairness and justice. I want to impress upon you, however, that it is not your President nor indeed your Council that have made this Association what it is, but through each member bringing facts and opinions before you for consideration. I am confident from the prestige it has attained thus far that it will "lengthen its cords and strengthen its stakes."

It is with a feeling of gratification and pride that I look back upon the history of the Association and view its marvelous progress and ever-increasing success. This feeling is accelerated by the fact that every progressive step in Medicine, Surgery and Hygiene in the state is reflected from the Association.

What has it accomplished along these lines? The Medical profession of Mississippi in its organized capacity has always stood for higher Medical education. You have watched its progress along this line. There never was a day when an under-graduate could become a member of this Association although there were hundreds such practicing medicine in the state, and that too with a license from a body of physicians, really members of this Association. The fathers' knew that this was wrong, but they were powerless to help themselves at once. It was only by a stubborn, unyielding policy and the hardest kind of work, that the State Legislature was induced to make a higher standard. An under-graduate now does not think of going before the Board of Medical Examiners. He not only must be a graduate but he must be a graduate from a first class Medical College with a four year instead of a two year course, including the various branches of Medicine as well as a knowledge of many of the allied sciences.

Mississippi, having no Medical College, occupied a unique position in the Medical world. Being without a Medical College other states with colleges were bidding for our medical students, and it became necessary for them to raise their standards to keep pace with the higher and still higher standards fixed by this Association. Thus we become one of the leaders in the advance of the Medical Science.

We are now confronted with one of the greatest problems that has arisen in many a year. The Chiropractor is now knocking at the door of our Legislature for admittance. They want a Board of their own. This accomplished, this Board would admit incompetent men to practice who would soon drift into regular Medical practice. I cannot too earnestly insist that you use every effort to prevent this dire calamity. By such an act of the Legislature organized medicine would lose everything it has been fighting for during the last half century.

They are already at work with members of the Legislature for the 1926 session of that body, as evidenced by a letter received by a member and handed to me a few weeks ago. I think it wise to incorporate that letter in this address and is follows:

> "To the Members and the Senate and House of Representatives of the State of Mississippi.
>
> In the future you will no doubt be called upon to pass judgment on the

*Presidential address, read before the Fifty-Eighth Annual Meeting of the Mississippi State Medical Association, Biloxi, May 12, 1925.

merits of the science of Chiropractic through the medium of a bill that will be presented before your Honorable Body; therefore, that you may more intelligently act in this capacity, the Mississippi State Branch of the University Chiropractor's Association is going to send you each month beginning with December, a pamphlet written by Dr. James G. Greggerson, who is recognized as a man of authority on all things pertaining to Chiropractic.

These little messages each month will be very brief, interesting, and enlightening, therefore, we trust you will read them carefully so you will be sufficiently informed to vote for a true Chiropractic bill in 1926 without any hesitancy on your part."

(Signed) P. M. Jackson, D. C. Ph. C.
Secretary.

In this connection I desire to suggest and most earnestly urge that the incoming President, whoever he may be, shall be instructed to surround himself with an able body of men, and they begin at once a system of propaganda to counteract the efforts of the "Mississippi State Branch of the Universal Chiropractors Association." This work should not be delayed in my opinion.

Some two or three months ago the Legislature of the state of Tennessee passed an amendment to the law on requirements for Medical Practice. This law provides: ". . . that the Department of Education may not require or recommend standards of preliminary education of persons desiring to practice medicine, surgery, osteopathy,or any other form of the healing art in the state of Tennessee higher than the requirements of a diploma from some reputable four year high school." This amendment also removes all qualifications of those who desire to take the examination, not even requiring a diploma from any medical college. This condition is deplorable, and I only mention it to remind you that a similar sentiment prevails over the entire state of Mississippi. Sooner or later this matter will come up before our own Legislature and we might as well be prepared to meet the situation. I am not informed that the Legislature of the state of Tennessee reversed itself but it is enough to know that it passed the Legislature of a sister state which would not have been possible had there not been a strong favorable sentiment throughout that state.

Many of the recent achievements of modern medicine have been brought to the profession through laboratory workers, witness perhaps first and foremost the development of practical blood chemical methods. Blood has been examined chemically for many years but it has been only recently that the long tedious processes have been replaced by methods simple enough and rapid enough for general clinical use. And what a fertile field these tests have opened up, especially in the study of the organic processes. Determination of urea, uric acid, creatinine, and chlorides have shown the fallacies of depending or urinalyses alone as an indicator for diagnosis, progress, or prognosis in kidney and circulatory diseases, or in deciding operative risk in surgery.

With the recent important work on diabetes, it has been shown that only by blood chemical tests can this disease be recognized in its earliest stages when most amenable to treatment. Insulin, which has revolutionized the treatment of diabetes, can only be intelligently administered when checked by blood examinations, for when the urine is sugar-free, as it should be, only examination of the blood will show what the body is doing with the food ingested.

The Wassermann test has been so improved and sensitized that in competent hands so-called false positives are practically unknown and the test is recognized as an aid in diagnosis and as a check for treatment.

While chemical tests have somewhat overshadowed work on bacteria in the last few years, bacteriology is still a young science and still adding rapidly to our knowledge of disease, infection and immunity. Through bacteriology we are now able to prevent those formerly destructive diseases of the typhoid group. By bacteriology we are able to recognize and cure diphtheria; to detect susceptibles and to permanently immunize them. In a similar way we can prevent tetanus. Within the last year has been announced a cure for scarlet fever, together with means of determining susceptibility and of permanent immunization. While this latter work has not been finally accepted, it is very probable that it will prove as valuable as the work with diphtheria. Much is being learned in regard to focal infections and their remote effects, and numerous diseases of hitherto unknown origin are being shown as directly or indirectly bacterial. At the present time concentrated effort is being applied to the study of the common cold which, while not often a fatal affection, is the

cause of much loss of time, efficiency and comfort.

In the realm of parasitology, great progress has been made in the handling of malaria, yellow fever, and intestinal parasites.

While no cause or cure has yet been found for malignant growths, much intensive study is being carried out in many places and already our knowledge of the microscopic tissues, their structure, functions and methods of growth, leads to the hope that at some not distant day medicine will master or check this scourge.

It has been and still is the task of the laboratory worker to find out the cause and the process in every condition. When these are known, cure then can be evolved or the disease prevented. Such work, however, is distinctly the province of the doctor of medicine who is devoting his life to its accomplishment. This work has been retarded and much harm done in the past by unskilled technicians with vague knowledge of the basic medical sciences. As well for the surgeon to turn over his gall bladder operations to a six months' probationer or first year medical student as to ask a technician with no medical knowledge to advise him in regard to blood conditions and tissue sections. There is a national movement now on foot to establish a system of certified or approved laboratories headed only by competent doctors of medicine much the same as hospitals are approved when they meet certain standards. The sooner such a means of distinguishing the good form the bad is brought about, the faster will our knowledge of medicine through the laboratory sciences advance.

I cannot too strongly urge that this Association take definite action in this movement. We must keep abreast with the progress that is going on about us. By giving this movement our hearty endorsement, we will not only strengthen the hands of the promoters but place ourselves in a receptive mood for the benefits that are bound to follow.

Surgery is as old as man himself. During the Medieval days it was divorced from medicine and the priesthood and became a craft for the itinerant barber. I suppose we might say with correctness that surgery as an art began with Ambrose Pare who at one time in his life was the apprentice of a barber. From the time of Pare there gradually developed an art based upon sound knowledge. Anatomy and pathology became a part of the surgeon's craft. In 1842 Crawford Long first performed a surgical operation under anesthesia. Shortly thereafter, in 1867, Lister published the results of his experiments based on the researches of Pasteur. Surgical safety then remained only for a fuller development. The field of endeavor along surgical lines materially increased the responsibility of the surgeon of today. The art of surgery is very different from the science of surgery. Of course, the art is very important, but it is the scientific part that most concerns the patient, whose safety and well-being are of chief import to the surgeon. Anxiety for the welfare of the patient should exist during the preliminary examination and operation, and follow him even after his departure from the hospital. It is a mistake for the surgeon to depend altogether on other experts for his diagnosis. He should first be well informed as to the location and discovery of the various human ills, their causes and effects and treatment. Inability so to do is an unpardonable failing. With so many opportunities from day to day for observing the external symptoms prior to operation, and of viewing the living pathology during operation thus obtaining first hand information of effect and cause, and vice-versa, it follows that these circumstances and observations should be stamped so indelibly in the mind and upon the memory of the surgeon that he, of all practitioners, ought to be a good diagnostician. Even with the influx of the many helpful aids to diagnosis, the responsibility of the surgeon is neither lessened nor diminished, for it would be more in keeping and of higher tribute to the profession that these instrumentalities should be employed for confirmation rather than for discovery.

The real surgeon, however, does not conclude his work upon the removal of the patient from the operating table, nor should his interest in the case be devoted entirely to convalescence and apparent recovery. His system should contemplate observation at regular intervals, depending upon the original ailment, until the patient is fully restored to health and able to resume his usual responsibilities.

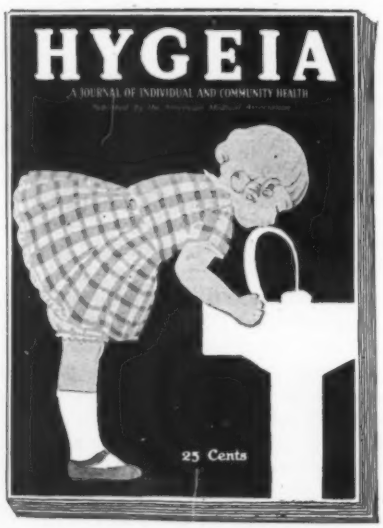
Too much cannot be said by way of praise to this branch of the profession for the invaluable service which they have rendered humanity, and I feel sure that they will continue to merit the confidence so richly bestowed by the progressive and enlightened conscience of Medicine.

Medicine has kept pace with Surgery, Bacteriology and Hygiene, and the advance in all these branches is directly or indirectly due to organized medicine. The

demand on the part of organized Medicine for higher and still higher standards has stimulated the teachers of these branches to greater efforts until today we have a composite whole that makes the Medical Profession the greatest of any in the world and greater by far than it has been at any stages in its history throughout all the ages.

Let me again express my sincere gratitude for the distinguished honor you have conferred upon me and pour out to you a libation of friendship, goodwill and appreciation.

YOUR PATIENTS *and* HYGEIA



Your patients turn to you for more than medical aid. They expect advice, counsel and suggestions regarding many phases of their physical well being —many times you would like to discuss these things, but lack time or opportunity.

Keep HYGEIA always on your reception room table. Let its articles speak to the mother regarding child nutrition and training, personal hygiene, sanitation, dietary problems. Let the father learn from Hygia the advice, the explanations, the warnings which he should have relative to matters of health and disease.

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AMERICAN MEDICAL ASSOCIATION
535 North Dearborn Street
CHICAGO

MEDICAL ECONOMICS

Chas. A. Bahn, M.D., Department Editor.

PRACTICAL MEDICAL ECONOMICS

PART 10.

How do you compute your charges for medical services? Do you roughly estimate for each visit or patient, the most that you think obtainable for your services, or is your charge based upon its value to the patient and its cost to you in time and skill?

A study of the practical and equitable distribution of medical charges based upon the experience and observation of the profession and supplemented by accurate facts and figures would be both interesting and profitable.

Our ideal is to give every patient a full dollar's worth of real value for every dollar that we ask, and yet to allow sufficient profit that we may accumulate enough of this world's goods to provide for us and ours in reasonable comfort, both present and future.

In the commercial world there are essentially two ways of estimating value. The first is the trader's method; the service or article is supposed to bring all that can be gotton for it and it is presumed that both the buyer and the seller will probably try to take any possible advantage of the other. The other method is based on a uniform price, which assumes a reasonable cost of production and a reasonable profit for all concerned, and that neither the financial status nor the desire of the buyer for the article or the service will be reflected in the price. In the professional world, this method has not been generally adopted because the actual cost of service has not been practically determined and because the same service has a most variable value depending upon its use. We largely cling to the traders' method. Unfortunately the purchaser of professional services has no way of knowing the value of what he has bought until after he has purchased it. We assume that the poor man's dollar should buy more than the rich man's dollar because the rich man is supposed to earn dollars more easily and his life is supposed to be more valuable from a monitary standpoint. Intelligent study could materially reduce the excessively wide variations in charges which at present exist, for the same medical service.

There are several fundamental factors which consciously or unconsciously determine our charges.

The first is the actual cost to the doctor, that is the actual outlay of money to you. If your medical expense, including office maintenance, automobile for professional use, and other attendant outlay, is five hundred dollars per month containing twenty-five working days of eight hours each, the cost to you of your working time is $2.50 per hour. If a person takes up an hour of your office time, you are out of pocket $2.50 in actual money. Whether you treat patients, chat with your friends, work in a clinic, or teach during this time, the cost to you is the same. In the last two instances the outlay is possibly justified by the increased medical and surgical experience that you gain, by the association with colleagues, and the increased remuneration which you hope to receive, thereby.

The second factor is your salary. All of us are working on a salary, whether we work for ourselves or someone else. There are approximately sixteen hundred working hours in a year available for the examination and treatment of patients. After a reasonable number of years in medical practice, our daily production variation is probably not as great as we think.

There are two general methods of estimating production value. The first assumes a reasonable production in a given time and hence considers only the time factor. This is the method used in the employment of most assistance and is that used by labor organizations possibly because simpler. The other method bases valuation on actual production and determines the value and amount of compensation of each unit. This is probably the more equitable method where the service has not great variations.

As a physician if you charge too much for your time, no one will care to buy it, while if you charge too little you will probably not be able to accumulate sufficient to render the best service. After all the laws of supply and demand largely govern our salaries. Medical value may be estimated on the basis of the productive life and cost of education and equipment with the addition of a time factor.

The third and last factor is the value

of the service to the purchaser. Heretofore, we have assumed a reasonable productive use of time and accomplishment. Should the service, however, be of greater value to the purchaser, the question of increased compensation enters into the problem. Personally, I think that this factor is less important than most of us believe. The vast majority of our services are rendered to the middle classes who are the real producers of the nation, and whose incomes do not really vary such a great deal. Generally speaking, the expense of time, effort and money, necessary to determine accurately the financial status of patients, does not justify itself. I believe that for the majority, standardized medical charges, with reasonable variations are the most simple, equitable, and satisfactory basis of medical values.

A few very successful physicians base charges on yearly net income, but for the rank and file, I do not believe that this plan is of practical value.

Each of us must work out how much value we can put into the average working hour of our time, from the standpoint of the purchaser, who probably has to work just as hard for his livelihood as do we. The great problem that most of us are daily contending with, is how to put more value into our time that we may be entitled to greater remuneration therefore.

In some medical branches, standard charges are easily possible because there is but little variation in the amount of time, effort and expense involved in a given service. Cafeteria charging methods represent one extreme, our present methods the other.

The future will probably see more uniform medical charges somewhere between the two extremes, which at present prevail, and based with reasonable variations, on an average consumption of time, effort, skill and especially their value to the purchaser. In other words the peaks will be somewhat leveled and the valleys filled in. The sooner we see the hand writing on the wall and adapt ourselves to future necessities, instead of having to be driven into them, the better will it be for us and the public.

Occasionally a doctor deprecates society practice. Why should a number of persons not collectively employ medical service just as railroads and other corporations successfully do if the salaries paid physicians justify efficient medical assistance.

State or national medical service will probably occur only when the medical profession is unable to even fairly, efficiently, and economically conserve the public health. There is usually no tendency towards public ownership of any utility or service as long as it is reasonably well conducted in private hands.

Practically free medical aid sustained by hospitals, communities, or states, etc., probably reduces the potential number of office patients in some communities, though how much is hard to say. Unfortunately we have no accurate facts nor figures on this subject which will really show whether or not physicians in office practice really suffer thereby. If this should be the case, physicians have the remedy in their own hands. We apparently feel that this labor of love is amply compensated by the pleasure, experience and possible prestige that we derive therefrom, or we would bring about a change. Lawyers and others who render service to the charges of the community or state are, I believe, reasonably compensated—why not physicians?

Medical charges vary greatly in different sections of the country. In our city, for example, charges are probably lower than in any other large city in the United States. The reasons are apparently, the large number of persons treated in free clinics, the number of patients necessary for clinical teaching, and the fact that our city is not a rich one, which probably means that the average person does not produce as much wealth here as in some other cities. As a result of these factors, many who could afford to pay a moderate fee for medical service just as they do for every other need of life, seek free medical attention especially in view of the fact that we have educated the public by inference that it is the most efficient. And in many instances it is, because for the person especially of moderate means where complicated and varied examinations are necessary, clinic service is more satisfactory except possibly for the delays. The doctors who work in clinics are usually reasonably well informed and medical office service and charges have such wide variations and their results are often not sufficiently coordinated that the patient can derive the greatest benefit from the expense of time and money incurred.

This department is now ten months old. The results of our efforts are hard to determine because of the difficulty in obtaining constructive criticism. We don't want you to agree with our ideas unless we have

appealed to your sense of reason. We do not believe in promptly adopting every impractical experiment nor do we believe that the world is flat. We do believe that there is much to be accomplished in practically increasing our usefulness independently of prejudices of the past. This means more and better service to the public and greater financial returns with corresponding prosperity to the medical profession.

If these articles have interested you tell us as frankly and freely what you think of them, as we have placed various views before you. We want criticism and suggestions. What interests you will probably interest others. We are devoting our time and efforts to the study of this new subject largely because we think it is the right thing to do. We believe that the big medical family should solve its own practical problems and not be dependent upon those who have something for sale to teach us how to manage our affairs, and we believe that you have sufficient brains to do it, if they can be interested. What do you think of it?

Address all communications to Dr. Chas. A. Bahn, 1551 Canal St.

The Selection of a Physician

The selection of a physician for an operation or as a family doctor, is usually made with some care. We consult those who have employed physicians and are governed largely by their recommendations. But having selected a physician, we follow his advice. We trust him even to the extent of submitting to operations that may have serious results.

The point is, we trust THE MAN WHO KNOWS.

Now, doctor, the institutions and the firms advertised in this Journal were carefully investigated before their announcements were printed here. The medical products were submitted to laboratory tests before they were accepted by the Council on Pharmacy and Chemistry.

On the same principle that patients trust you about matters with which you are informed, so your publishers urge you to trust their judgment and buy goods from the advertisers who are admitted to these pages. Other considerations being equal, you should give your advertisers PREFERENCE because you know they are believed to be trustworthy. Don't speculate or experiment! Trust the APPROVED firms and goods!

NEWS AND COMMENT

Lucien A. Ledoux, M. D., Department Editor

"Every man owes some of his time to the upbuilding of the profession to which he belongs."
—Theodore Roosevelt.

LOUISIANA STATE MEDICAL SOCIETY

The forty-sixth annual meeting of the Society was one of the best in its history. An excellent scientific program interposed with suitable entertainment furnished those in attendance with an enjoyable and profitable visit. The total registration was 592.

Dr. H. E. Bernadas, General Chairman, and his sub-chairman and Committees deserve full credit for the splendid manner in which the Convention was entertained. The House of Delegates under the capable leadership of Dr. Leon Menville functioned smoothly and efficiently, and allowed its members ample time to attend the Scientific Session. The Secretary-Treasurer Dr. P. T. Talbot saw to it that the meeting went over according to schedule, and as usual was most effective.

Monroe was chosen as the next meeting place. The following officers were elected:

President, Dr. E. M. Ellis, Crowley; President-Elect, Dr. S. M. Blackshear, New Orleans; First-Vice-President, Dr. F. J. Chalaron, New Orleans; Second Vice-President, Dr. J. A. White, Alexandria; Third Vice-President, Dr. L. A. Crawford, Patterson; Chairman House of Delegates, Dr. L. J. Menville, New Orleans; Secretary-Treasurer, Dr. P. T. Talbot, New Orleans; Past President, Dr. C. V. Unsworth, New Orleans. Councilors, First District, Dr. H. E. Bernadas, New Orleans; Second District, Dr. H. W. Kostmayer, New Orleans; Third District, Dr. F. T. Gouaux, Lockport; Fourth District, Dr. A. A. Herold, Shreveport; Fifth District, Dr. F. C. Bennett, Monroe; Sixth District, Dr. C. A. Weiss, Baton Rouge; Seventh District, Dr. V. A. Miller, Lake Arthur; Eighth District, Dr. S. J. Couvillon, Moreauxville.

Delegates from the Louisiana State Medical Society to the American Medical Association Meeting at Atlantic City: Dr. W. H. Seemann and Dr. S. M. Blackshear. Dr. Paul J. Gelpi and Dr. Lester Williams, Alternates.

MISSISSIPPI STATE MEDICAL ASSOCIATION MEETING

The fifty-eighth annual meeting of Mississippi State Medical Association held at Biloxi was brought to a close with the election of Dr. G. S. Bryan of Amory as President, and the selection of Jackson as the next meeting place. The other officers elected are:

Dr. F. G. Riley, Meridian and Dr. C. N. Ringston, Brookhaven, vice-presidents; T. M. Dye, Clarksdale, Secretary; J. N. Buchanan, Meridian, treasurer; S. W. Johnston, Vicksburg, delegate to the American Medical Association.

The New Orleans Medical and Surgical Journal was again selected as the official organ of the Mississippi State Medical Association.

The following Louisiana physicians attended the recent Mississippi State Medical Association Meeting held at Biloxi'

Drs. Oscar Dowling, H. W. E. Walther, H. B. Gessner, J. B. Elliott, P. T. Talbot, and C. Jeff Miller. Dr. J. B. Elliott of New Orleans was the Annual Orator.

EIGHTH CONGRESSIONAL DISTRICT

Amid the picturesque pine trees and hills of the scenic Red River valley, another domain forming the original territory of Louisiana, right opposite the "hub city" of Louisiana-Alexandria, virtually in the little city of Pineville, La., amid a multitude of modern structures, wherein are kept numberless poor unfortunate men, women and children of all colors, creed and descriptions, victims of dementia and feeble-mindedness, is a plant so well kept and with a discipline unsurpassed by any institution of its kind south of the Ohio river—a credit to the nation. The members of the Rapides Parish and Eighth District Medical Societies, their wives and lady escorts, gathered in the spacious assembly hall of the Central Louisiana State Hospital, decorated and illuminated with all the splendor and glory of May time Monday evening, May 4th, 1925, as guests of Dr. John Newton Thomas, superintendent of this splendid institution.

Besides the many medical men and their wives from various sections of the district in attendance, many statesmen and prominent physicians of the state were present—the following being the special guests of Dr. and Mrs. Thomas: Ex-Governor and Mrs. J. Y. Sanders, Dr. and Mrs. T. J. Perkins of the East Louisiana State Hospital, Dr. and Mrs. R. G. McC. Carruth of New Roads, Dr. and Mrs. S. J. Couvillon of Moreauville, Captain Teale of the Hospital Administrative Board, residing at Colfax.

The following valuable scientific program was rendered by the Superintendent, Dr. Jno. N. Thomas and his staff:

1. "The Relation of a State Hospital for the Insane to the People of the State," by Dr. J. N. Thomas.
2. "Dementia Precox an Manie Depressure Psychosis," by Dr. T. C. Cooper.
3. "Genęral Paralysis of the Insane," by Dr. R. H. Foster.
4. "The State Care of Mentally Deficient," by Dr. D. H. Keller.
5. "Paranoia and Psychopathic Personality," by Dr. Robert H. Bryant.

The paper of Dr. Thomas proved to have been "A chef-d'ouvre," and was well discussed and complimented. The papers of the staff were all well received and were all accompanied by illustrations of a series of cases dealing with each subject as presented by the various papers read.

The occasion was the very best joint meeting of the Rapides Parish and District societies. A delicious luncheon was served following the program, under the auspices of Dr. and Mrs. Thomas, to whom flows of thanks were tendered by all present for so splendid a reception.

FOURTH DISTRICT MEDICAL SOCIETY

The regular semi-annual meeting of the Fourth District Medical Society was held at the Shreveport Charity Hospital on Tusday, May 19, beginning at 6 p. m. In the absence of the President, Dr. C. M. Baker, the meeting was called to order by the First Vice-President, Dr. E. L. Sanderson, of Shreveport, who welcomed the visitors on behalf of the Shreveport Medical Society.

After the reading of the minutes papers were read by Dr. J. B. Benton, of Minden, on Cystitis, by Dr. S. W. Boyce, Shreveport, on Pyelitis, and by Dr. D. L. Kerlin, Shreveport, on Dercum's Method of Treating Neuro-Syphilis, with report of cases.

At eight o'clock dinner was served by the Charity Hospital after which the balance of the program was carried out as follows, with Vice-President Crowe in the chair: Communicable Diseases, by Dr. A. G. Heath, of Shreveport; Some Conditions of the Kidney and Ureter, by Dr. J. R. Stamper, of Shreveport; Presentation of a Complicated Case by Dr. T. J. Fleming, of Shreveport, and Remarks and Report by Councillor Dr. A. A. Herold.

The meeting was well attended, about 100 members being present and promises made of a better meeting in the fall.

WASHINGTON PARISH MEDICAL SOCIETY

On Thursday evening, April 30th, 1925, from 8 p. m. to 11 p. m., in the dining room of the Pine Tree Inn, Bogalusa, La., the Washington Parish Medical Society held its monthly meeting for April.

The program for this meeting was made up of two papers as follows:

"Asthma with Report of Case," by Dr. J. H. Slaughter. Discussion opened by Drs. Thompson and Pierce.

"Pure Water a Factor in Health," by Dr. F. M. Smith. Discussion opened by Drs. Sanders and Brock.

An enjoyable social hour in the form of a luncheon was spent, before the meeting. These meetings are attracting much interest and are very well attended.

ST. TAMMANY PARISH MEDICAL SOCIETY

At a meeting of the St. Tammany Parish Medical Society held on April 10, 1925, the following resolution was unanimously adopted:

Whereas, it has pleased the All-wise Providence to call from his labors our friend and co-worker, Dr. Bascom Beauregard Warren,

Therefore, be it resolved, That we, the St. Tammany Parish Medical Society, in regular session assembled, deeply regret that we have to chronicle the loss of so valued and able a member of our society and of the medical fraternity, and that we desire to extend our heartfelt sympathy to the bereaved wife and daughters on account of their loss.

Be it further resolved, That a copy of this resolution be sent to the St. Tammany Farmer and the New Orleans Medical and Surgical Journal for publication, and to Mrs. B. B. Warren.

Dr. F. F. Young, Dr. H. D. Bulloch, Dr. A. G. Maylie, Committee on Necrology.

MONTHLY MEETINGS IN NEW ORLEANS

The Medical Staff meetings of Charity Hospital are held on the third Tuesday of each month, and the Surgical Staff meetings are held on the third Wednesday of each month in the Reception Room at 8 p.m.

The Eye, Ear, Nose and Throat Hospital meetings are held on the first Monday of each month in the Library at 8 p.m.

The Eye, Ear, Nose and Throat Club meetings are held on the third Thursday of every month in the office of the Orleans Parish Medical Society at 8 p.m.

Hotel Dieu meetings are held on the third Monday of each month in the Nurses' Class Room at 8 p.m.

Mercy Hospital meetings are held on the third Friday of each month at 8 p.m.

Presbyterian Hospital meetings are held on the last Thursday of each month at 8 p.m. in the Out Clinic Building.

Touro Infirmary meetings are held on the third Wednesday of each month at 8 p.m. in the Staff Assembly Room.

New Orleans Gynecological and Obstetrical Society meets the second Thursday of every month at 8 p.m.

The Louisiana State Board of Health recently passed two resolutions, one commending and reiterating the position of the American Medical Association regarding the ambulatory treatment of drug addicts, which was disapproved; the other commending the activity of the President, Dr. Oscar Dowling, in clearing up the Narcotic Law Abuses in Shreveport.

NEW APPOINTMENTS

The following are the new members of the Louisiana State Board of Health:

Dr. Fred Ratzburg of Shreveport, dentist; Mrs. L. C. McVoy, Baton Rouge, educator; Dr. T. T. Tarlton (vice-president) of Grand Coteau, physician; Dr. M. P. Boebinger, New Orleans, physician; Mr. T. J. Labbe, St. Martinsville, druggist; Dr. T. E. Wright, Monroe, physician; Dr. E. S. Mathews, Bunkie, physician.

Those who have been appointed to positions are: Dr. E. S. Kelly, Food and Drug Commissioner; Dr. J. E. Doussan, State Registrar Vital Statistics; vice, Dr. J. G. Dempsey; Mr. W. H. Hankins, Oil Supervisor.

DIED

Dr. Samuel M. D. Clark, at New Orleans, May 1st, 1925.

Dr. S. F. Braud, at New Orleans, May 18th, 1925. A graduate of Tulane University and a member of the Orleans Parish Medical Society and Louisiana State Medical Society.

Dr. Paul J. Gelpi and Dr. J. M. Batchelor have been appointed members of the City Board of Health of New Orleans.

The medical personnel of the New Health Board of the City of New Orleans is as follows: Dr. W. H. Robin, Supt., Dr. F. R. Gomila, Secretary; Drs. P. L. Querens, T. F. Kirn, J. Chretien, J. L. Stulb, F. J. Kinberger, A. L. Metz,, and W. H. Seemann.

The Hotel Dieu Training School of Nursing held its Graduating Exercise Tuesday, May 12th, at seven-thirty p. m., on the Hotel Dieu Roof Garden.

Twenty-eight nurses were graduated. The principal speakers of the evening were Dr. C. V. Unsworth, chairman; Rev. J. L. O'Regan, Judge W. H. Byrnes and Dr. Ernest Lewis. The music was rendered by the Hotel Dieu Glee Club.

DR. ALDO CASTELLANI

A recent distinguished visitor in New Orleans was Dr. Aldo Castellani, Professor in the London School of Tropical Medicine, and world famous expert on Tropical Diseases.

During his stay, he was the guest of the Orleans Parish Medical Society at one of its regular meetings; conducted a Clinic on Tropical Diseases at the Charity Hospital which was largely attended, and under the auspices of the Medical Faculty of Tulane University, addressed the local medical profession on "Certain Diseases of Tropical American" at a special meeting.

He was shown over the city and his attention directed to the splendid medical facilities here. In commenting on his visit, he said in part—"The Medical School of Tulane University is one of the finest institutions of its kind, not only in this country, but in the world—I can speak of the Charity Hospital only with words of admiration. The way that institution is run is excellent, and I have seen quite a few Hospitals in the World. I saw the United States Marine Hospital and the Hotel Dieu. They are both fine institutions. New Orleans ranks high as a medical center. I find it on the same plane as London, Paris, New York and Baltimore in this respect."

Louisiana was represented at the recent Annual Meeting of the Texas State Medical Association held in Austin, by the following: Drs. R. C. Lynch and Lucien LeDoux of New Orleans; Drs. Oscar Dowling and S. C. Barrow of Shreveport.

They took part in the Scientific Program and Dr. Lynch in addition appeared before the San Antonio Medical Society. Dr. S. C. Barrow was the fraternal delegate from Louisiana.

A Post-Graduate course, under the auspices of the Faculty of the School of Medicine of Strassburg, in Venereal and Diseases of the Skin, will be given beginning September 12th to November 7th, inclusive.

The course will be under the immediate direction of Prof. L. M. Pautrier, assisted by a very competent staff. The histology, bacteriology, pathology, and clinical aspects, both of diagnosis and treatment, will be thoroughly reviewed. Matriculation fee 200 francs.

NEW YORK CITY TO HAVE MOTOR TOURISTS' CAMP

Automobile tourists will be gratified to know that at last New York City has a motorists camp.

Twenty-three thousand babies born in American Cities, studied through their first year or as much of the first year as the infant survived, furnished the data for a comprehensive analysis of infant mortality in this country made public today by the Children's Bureau of the U. S. Department of Labor.

Expected to form the basis for further effort to reduce infant mortality in the United States, and especially the mortality during the first month of life, this report is considered one of the most important yet issued by the Children's cate that there are annually 187,000 deaths un- Bureau. Latest figures, it is pointed out, indicate that there are annually 187,000 deaths under 1 year age in the United States, 98,000 of them occurring during the first month.

At the Ninth Congress of American Physicians and Surgeons, held in Washington in May, 1913, the American Gynecological Society presented to the other branches of the Congress a resolution requesting the appointment of two or more delegates to co-operate in forming a national organization to conduct a concerted educational effort for the prevention and cure of cancer.

A plan has recently gone into effect at the Massachusetts General Hospital, Boston, whereby the facilities of that institution are to be put to the fullest possible use in the diagnosis and treatment of cancer and other tumors.

In the death of Dr. LeRoy Broun, at his home in New York, April 22nd, the cause of cancer control lost a strong champion and the American Society for the Control of Cancer a devoted and wise member.

REUNION AND DINNER OF THE MEDICAL OFFICERS OF THE WORLD WAR

An attractive feature of the Annual Meeting of the American Medical Association at Atlantic City will be the reunion of the Medical men who served their country in the Army and Navy during the World War, to renew the memories, friendships and associations of those eventful days.

PUBLICATIONS RECEIVED

P. Blakiston's Son & Co., Philadelphia: "A Compend of Gynecology," by Wm. Hughes Wells, M. D., fifth edition, revised and enlarged by William Benson Harer, M. D. "Matthes' Differential Diagnosis," by I. W. Held, M. D. and M. H. Gross, M. D.

Paul B. Hoeber, Inc., New York: "Medical and Surgical Report of The Roosevelt Hospital, New York." "Clinical Features of Heart Disease," by Leroy Crummer, M. D. "Recovery Record for Use in Tuberculosis," by Gerald B. Webb, M. D. and Charles T. Ryder, M. D.

H. K. Lewis & Co., Ltd., London: "The Advance of Orthopaedic Surgery," by A. H. Tubby, C. B., C. M. G.

REPRINTS

"Gas Cysts of the Intestine; with Report of Three Cases," by H. W. Mills, M. R. C. S., Eng., L. R. C. P., Lond., F. A. C. S. "The Principles Governing the Distrbiution of Physicians and Some Corollaries Thereof," by William Allen Pusey. "A Diet for Peptic Ulcer," by A. Altshuler, M. D.